

# **NEW!**

*New ones*

BULLETIN NO. 100, ISSUE NO. 8  
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THIS ISSUE CANCELS ISSUE NO. 7

# **Starrett®**

## **PRECISION TOOLS**

No. 995 Universal  
Precision Gage  
(Patented)

THE L. S. STARRETT COMPANY, Athol, Mass., U. S. A.  
Since 1880 — World's Greatest Toolmakers



**Buy Starrett Through Your Distributor**

# Specify **Starrett** for the Newest

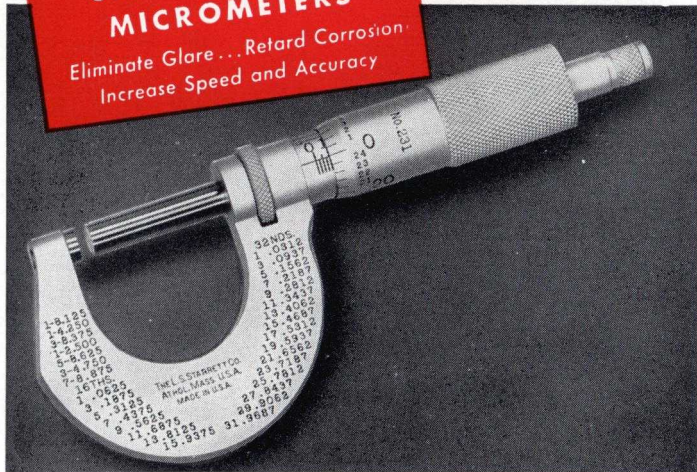
TRADE MARK  
REG. U. S. PAT. OFF.

## Starrett

### SATIN CHROME MICROMETERS

Eliminate Glare... Retard Corrosion  
Increase Speed and Accuracy

PIONEERED and DEVELOPED  
by THE L. S. STARRETT CO.



## WITH RATCHET STOP OR FRICTION THIMBLE

**Insures Uniform Pressure, Uniform Readings Every Time**

Now all Starrett Micrometers—including the popular Thimble Friction type and the popular priced Black Frame type have non-reflecting Satin Chrome Finish. No squinting, no shifting to better light . . . the markings stand out sharp, clear and easy to read under any illumination. And eye-smoothing Satin Chrome Finish is highly resistant to stains and corrosion.

For the best in precision measuring, buy Starrett Satin Chrome Micrometers. Your distributor carries a complete line . . . see him today.

**Buy Starrett Through Your Distributor**

### PLUS THESE BIG FEATURES AT NO EXTRA COST

- Hi-Micro (mirror-like) finish on faces of anvils and spindles to insure more accurate measurement.
- Threads hardened, stabilized and ground from the solid.
- Quick Reading Figures with every graduation on the thimble numbered for positive identification.
- Decimal Equivalents of 8ths, 16ths, 32nds and 64ths conveniently marked on the frame.
- Simple Adjustment for wear.

*For Complete Listing of New Starrett Tools  
See Index on Page 53*



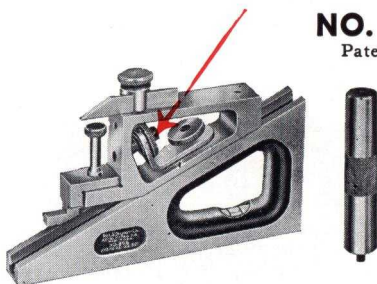
# and the Finest in Precision Tools

## STARRETT UNIVERSAL PRECISION GAGE

With Fine Adjustment

**NO. 995**

Patented



Specifically designed for gage makers, inspectors, tool and die makers, and machinists, the new Starrett Universal Precision Gage combines the unique features of a long-desired *fine adjustment* and all-around *versatility* that now makes possible *more accurate, faster* settings on a wide variety of applications.

A quick easy adjustment of the knurled thumb screw — no slow tedious tapping of the slide — is all that's necessary to set this gage smoothly and precisely to the exact size required, either from a micrometer, height gage, vernier caliper or gage blocks. A clamp nut locks the slide securely in place. Both thumb screw and lock nut are smaller than the gage thickness, permitting the gage to be used on its sides without interference.

Besides sensitive adjustment, the gage has other features that make it truly universal. With the scribing attachment it can be used as a surface or height gage. A novel patented offset attachment or "foot" is also available that permits settings in narrow areas or working  $\frac{1}{8}$ " below the base line. The 3" knurled extension provides an increased range of  $9\frac{1}{4}$ ". An inbuilt level in the base is another desirable feature.

This versatile gage has many further useful applications. Use it as a planer and shaper gage; for gap measurement, face to face, etc.; as an adjustable parallel; for transferring settings with indicators; on surface plates or machine platens for checking and layout; as a height gage; as a scribe for setting up and leveling; with gage blocks or a sine bar. In all these applications, flush surfaces permit use on base, end, top of slide or sides.

The Universal Precision Gage is built to the highest standards of accuracy. Basic parts are made from steel forgings. All working surfaces are hardened and accurately ground to close limits for parallelism and alignment. An exclusive feature is the combination flat and "V" ways on the slide and base which are *form ground*. This provides superior line contact insuring accuracy in all positions with absolutely no side play. Approximate width of the gage is  $\frac{3}{4}$ "; length  $5\frac{1}{4}$ ". Capacity, with both extensions,  $10\frac{1}{4}$ "; without extensions, 7".

### PRICES

No. 995-A	with 3" Extension and Case.....	\$21.50
No. 995-B	Scriber and Scriber Holder only .....	2.25
No. 995-C	1" Extension only .....	1.25
No. 995-D	Offset Attachment only .....	3.50
No. 995-E	Complete, No. 995 A, B, C, D, in Case....	28.50

No. 995-A or No. 995-E sent in finished wood case with provisions for all attachments.

No. 995-E sent unless otherwise ordered.

Packed 1 in a Box.

## STARRETT VERNIER HEIGHT GAGE NO. 454 — 12 INCH

*With Full 12 Inch Capacity — Direct Reading from 1 to 12 Inches. Completely New Design With Heavier, More Rigid Construction Throughout.*

Starrett No. 454 Vernier Height Gages are now built in a new 12 inch size which replaces the previous 10 inch size. With a full 12 inch range, and direct reading from 1 to 12 inches, this gage has an even greater scope of application and will appeal to all toolmakers, inspectors and layout men.

The No. 454-12 inch Vernier Height Gage has been completely redesigned with heavier, more rigid construction throughout. The beam now is  $\frac{3}{16}$  inches thick by .850 inches wide and the base  $1\frac{3}{4}$  inches wide by  $3\frac{3}{4}$  inches long.

Like all Starrett Vernier Height Gages, the 12 inch gage has the beam hardened and ground to a very close tolerance. The base is hardened, ground and lapped square with the beam, insuring extreme rigidity and long life. Made of finest tool steel throughout.

Sharp, clean-cut machine divided graduations make this gage highly accurate and easy-to-read. Graduations have the Quick Reading feature. Precision readings and easy adjustment are insured by tight, smoothly-fitted Vernier slides. Vernier plates are adjustable.

Starrett Vernier Height Gages are also available in 18 and 24 inch sizes while 36 and 48 inch gages can be furnished on special order.

### Prices

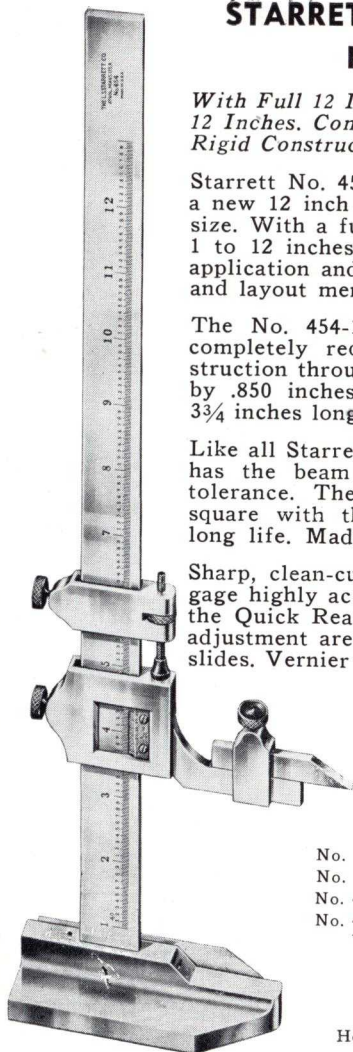
No. 454A — 12" with C attachment, with case .....	\$71.25
No. 454A — 12" with C attachment, without case ..	64.00
No. 454B — 12" without C attachment, with case ..	67.25
No. 454B — 12" without C attachment, without case .....	60.00

Also Available in Metric

No. 454A with C attachment  
sent unless otherwise ordered.

Height Gages sent in Case unless otherwise ordered.

Packed 1 in a Box



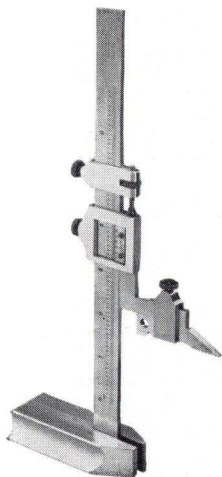


# STARRETT VERNIER HEIGHT GAGE

## NO. 354

*Slotted Base Permits Measurements from Base Surface*

*Direct Readings from 0 to 6 inches*



Toolmakers, inspectors, and layout men will appreciate this new vernier height gage since it permits direct readings from the base with a full range of 0 to 6 inches. Direct readings are possible because of the new slotted base and as a result measurements can be made from any plane surface without calculations.

Many additional features, together with precision workmanship throughout to rigid Starrett standards, make the No. 354 Vernier Height Gage an indispensable tool for any work requiring close accuracy. Ideal for layout, jig and fixture making because of its fine adjustment which permits measuring or marking off vertical distances ranging from 0 to 6 inches in thousandths of an inch. Measurements are taken from the lower face of the scriber. The scriber is easily removable for sharpening and the vernier plate is adjustable permitting the zero point to be maintained, in the event of wear. The scriber is reversible to allow indicators to be attached to the opposite end by means of a mounting hole. Available with or without depth gage attachment as listed below.

Made of fine steel throughout and ground with fine finish on all surfaces. Bottom of the base and the scriber are hardened and lapped. Bar is hardened for lasting precision and has a 7 inch scale with accurate machine divided graduations.

No. 354-A—6" with C attachment, with case ....\$44.00

No. 354-A—6" with C attachment, without case 39.00

No. 354-B—6" without C attachment, with case 40.00

No. 354-B—6" without C attachment, without case 35.00

No. 354-C—Depth Gage Attachment only, extra 4.00

No. 354-A—with C attachment sent unless otherwise ordered  
Height Gages sent in Case unless otherwise ordered

Packed 1 in a Box

# STARRETT TUNGSTEN CARBIDE SCRIBERS

## NO. 454X

*For No. 454—12", 18" and 24" Vernier Height Gages*

When layout lines are to be scribed on very hard materials, such as hardened steel, glass, etc., this scriber can be used to advantage. The scriber point is made of long wearing Tungsten Carbide which makes it possible to scribe sharp well defined lines on the hardest of materials. Available in two sizes for Starrett No. 454—12", 18" and 24" Vernier Height Gages. Interchangeable with the standard scribers on these gages.



No. 454X—12" Scriber



No. 454X

18" and 24" Scriber

### Prices

No. 454X—12" Tungsten Carbide Scriber for No. 454-12" Vernier Height Gage \$8.50

No. 454X—18" Tungsten Carbide Scriber for No. 454-18" Vernier Height Gage 10.50

No. 454X—24" Tungsten Carbide Scriber for No. 454-24" Vernier Height Gage 10.50

*Specify gage size when ordering*

Packed 1 in a Box

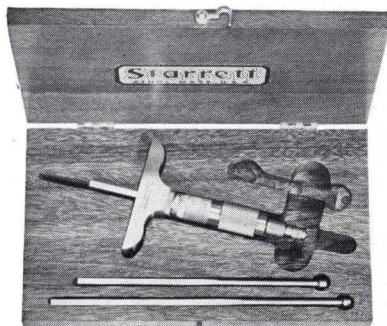
# A COMPLETE RANGE OF MICROMETER DEPTH GAGES— STARRETT MICROMETER DEPTH GAGES

## NO. 449

Patented

With Satin Chrome Finish

Blade Type Rods —  $2\frac{1}{2}$  inch and 4 inch Bases



Most versatile of all micrometer depth gages, the No. 449 has *blade-type* rods approximately .045 inch thick by  $\frac{1}{8}$  inch wide instead of a round rod which makes it ideal for all types of depth measurements. By holding the base in one hand, the blade can be turned with the fingers so it can be positioned at any angle relative to the base. In actual use for depth measurements, the blade does not turn but moves perpendicularly only. This outstanding feature permits measuring the depth of narrow shoulders without the blade rolling off, also slots and recesses as narrow as .045".

No-glare, rust resistant Satin Chrome Finish on sleeve and thimble makes markings stand out sharp and clear under any illumination, providing faster, more accurate readings. Graduations are Quick Reading in thousandths of an inch with every thousandth numbered. This gage is available in two sizes providing bases either  $2\frac{1}{2}$

inches or 4 inches long. Bases are hardened, ground and lapped for long accurate life. The screw is accurately ground and gives 1 inch movement.

Both sizes can be furnished for measuring from 0 to 3 inches by means of 3 rods or 0 to 6 inches by 6 rods as listed below. The rods, which have individual length adjustment, are inserted through a hole in the screw and brought to a positive seat by a knurled nut. Ends of rods are hardened, ground and lapped.

Lasting protection for these fine precision tools is provided by a finely finished wood case.

### PRICES

		Without Ratchet Stop	With Ratchet Stop
No. 449 A	$2\frac{1}{2}$ inch Base with Wrench and Finished Wood Case		
	Range 0 to 3 inches, with 3 rods .....	\$19.00	\$19.75
	Range 0 to 6 inches, with 6 rods .....	27.40	28.15
No. 449 B	4 inch Base with Wrench and Finished Wood Case		
	Range 0 to 3 inches, with 3 rods .....	\$23.00	\$23.75
	Range 0 to 6 inches, with 6 rods .....	31.40	32.15

Packed 1 in a Box

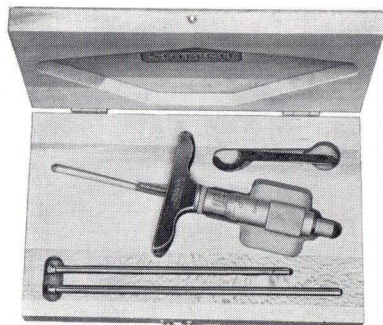
No. 449 Rods Only

0 to 1 inch Rod, each \$2.65	3 to 4 inch Rod, each \$2.65
1 to 2 inch Rod, each 2.65	4 to 5 inch Rod, each 2.80
2 to 3 inch Rod, each 2.65	5 to 6 inch Rod, each 2.95

WITH 2½, 3, 4, 5 AND 6 INCH BASES

## STARRETT MICROMETER DEPTH GAGES NO. 440

*With Lock Nut and Satin Chrome Finish  
2½ inch Base*



This highly useful gage is specifically designed to measure with micrometer precision the depth of holes, slots, projections and a wide variety of other applications. Sleeve and thimble have rust-resistant no glare Satin Chrome Finish. Markings stand out sharp and clear under any illumination providing faster, more accurate readings.

The base — which is hardened, ground and lapped for long-lasting precision — is 2½ inches long permitting use in restricted locations. Movement of the precision ground screw is 1 inch and Quick Reading graduations read in thousandths of an inch with every thousandth numbered. A lock nut assures firm setting at the exact measurement desired.

Two size ranges are available as listed below, measuring from 0 to 3 inches with 3 rods or 0 to 6 inches with 6 rods. Rods are ⅛ inch diameter with hardened, ground and lapped ends and have individual length adjustment. They are inserted through a hole in the screw and brought to a positive seat by a knurled nut.

Furnished in a finely finished wood case, providing lasting protection for these fine precision tools.

### PRICES

No. 440 2½ inch Base. With Lock Nut, Wrench and Finished Wood Case	Without	With
	Ratchet Stop	Ratchet Stop
Range 0 to 3 inches, with 3 rods	\$16.25	\$17.00
Range 0 to 6 inches, with 6 rods	23.25	24.00

*Also Available in Metric  
Packed 1 in a Box.*

### NO. 440 RODS ONLY

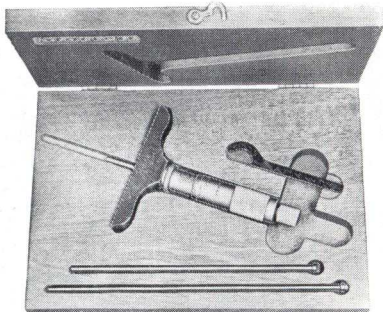
0 to 1 inch Rod, each	\$2.40	3 to 4 inch Rod, each	\$2.40
1 to 2 inch Rod, each	2.40	4 to 5 inch Rod, each	2.50
2 to 3 inch Rod, each	2.40	5 to 6 inch Rod, each	2.60



# STARRETT MICROMETER DEPTH GAGES

## NO. 445

*With Lock Nut and Satin Chrome Finish  
3 inch, 4 inch and 5 inch Bases*



Depth of holes, slots, projections, etc., can be measured with true micrometer precision by means of these fine gages. Rust-resistant, no-glare Satin Chrome Finish makes them far easier and faster to read, since markings stand out sharp and clear under any illumination.

These gages have all the outstanding features of No. 440 gages including the lock nut for holding the setting

at the precise measurement desired, but are made in a complete range of larger base sizes — 3 inches, 4 inches, and 5 inches long. Bases are hardened, ground and lapped for long-lived precision. The accurately ground screw gives a movement of 1 inch. Quick Reading graduations read in thousandths of an inch with every thousandth numbered.

Gages in all base sizes are available for measuring from 0 to 3 inches by means of 3 rods or 0 to 6 inches by 6 rods as listed below. The rods are 5/32 inch diameter and have individual length adjustment. Ends are hardened, ground and lapped. Rods are inserted through a hole in the screw and brought to a positive seat by a knurled nut.

Finely finished wood cases protect the accuracy of these fine precision tools.

### PRICES

		Without Ratchet Stop	With Ratchet Stop
No. 445A	3 inch Base With Lock Nut, Wrench and Finished Wood Case		
	Range 0 to 3 inches, with 3 rods .....	\$17.75	\$18.50
	Range 0 to 6 inches, with 6 rods .....	25.75	26.50
No. 445B	4 inch Base With Lock Nut, Wrench and Finished Wood Case		
	Range 0 to 3 inches, with 3 rods .....	19.75	20.50
	Range 0 to 6 inches, with 6 rods .....	26.75	27.50
No. 445C	5 inch Base With Lock Nut, Wrench and Finished Wood Case		
	Range 0 to 3 inches, with 3 rods .....	22.00	22.75
	Range 0 to 6 inches, with 6 rods .....	30.00	30.75

*Also Available in Metric*  
Packed 1 in a Box  
NO. 445 RODS ONLY

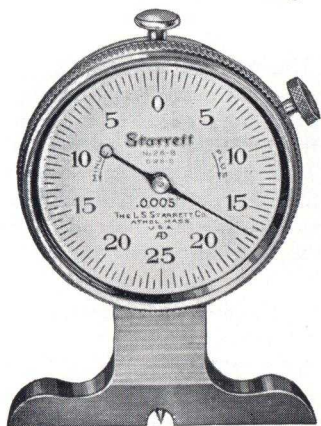
0 to 1 inch Rod, each \$2.40  
1 to 2 inch Rod, each 2.40  
2 to 3 inch Rod, each 2.40

3 to 4 inch Rod, each \$2.40  
4 to 5 inch Rod, each 2.50  
5 to 6 inch Rod, each 2.60

**Note:** No. 440D MICROMETER DEPTH GAGES WITH 6 INCH BASES ALSO AVAILABLE. SEE STARRETT CATALOG NO. 26

## STARRETT DIAL DEPTH GAGE NO. 643

*With Knife Edge Base. Push Down Point from Zero.  
Range 0 — .125 inches*



Depths of small holes, recesses, slots, halftones, engravings, etc. can be accurately and quickly measured with the No. 643 Dial Depth Gage. The knife edge base is  $2\frac{1}{2}$ " long and in combination with a needle-point rod permits exact positioning of the needle point relative to the surface to be measured, especially in restricted areas. Center of the base is also cut out to permit unobstructed view of the point. Base and point are hardened and ground.

The gage is operated by pressing down the push button at the top so that the needle point contacts the work surface to be measured. Depths up to .125 inches are registered directly on the dial in .0005" or plus or minus variations can be directly measured since the dial is the balanced type adjustable relative to zero.

Our No. 25-B Indicator is regularly furnished, graduated .0005", dial reading 0-25-0, range .125". The indicator, which is attached to the base by a flush type hollow set screw and is readily removed by means of a wrench furnished with the gage, is interchangeable with any other standard A.G.D. dial indicator.

No. 643 with Plain Bearings, in Leather Case	\$35.00
No. 643 with Plain Bearings, without Case	32.00
No. 643 with Jewel Bearings, in Leather Case	38.50
No. 643 with Jewel Bearings, without Case	35.50

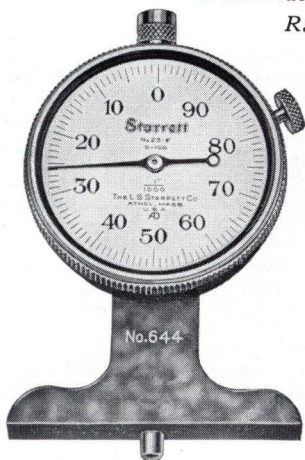
*Also Available in Metric*

**Note:** Sent with Jewel Bearings and Case unless otherwise ordered.

Packed 1 in a Box.

## STARRETT DIAL DEPTH GAGE NO. 644

*With Flat Base and 11 extra rods  
Range 0-3 inches*



The No. 644 Dial Depth Gage is designed for measuring the depth of holes, slots, recesses etc. ranging from 0 to 3 inches deep. To use this gage, the flat base is positioned on the top surface of the work allowing the rod to enter the hole or recess to its full depth. The measurement automatically registers directly on the dial in .001".

The base,  $2\frac{1}{2}$  inches long by  $\frac{1}{2}$  inch wide, is hardened and ground within close limits. The dial in-

dicator, which is attached to the base by a flush type hollow set screw and readily removable by means of a wrench furnished with the gage, is interchangeable with any other standard A.G.D. indicator.

Dial indicator regularly furnished is our No. 25-F adjustable relative to zero, graduated .001", dial reading 0-100, range .250". The gage comes equipped with a  $\frac{1}{4}$ " long rod approximately  $\frac{13}{64}$ " diameter and in addition, eleven other rods ranging in length from  $\frac{1}{2}$ " to 3" in increments of  $\frac{1}{4}$ " are also provided. The gage is furnished in a handsome leather case which also holds the 11 rods and permits quick, easy selection of the right rod for every job.

No. 644 with Plain Bearings, in Leather Case with 11 Rods \$35.00

No. 644 with Jewel Bearings, in Leather Case with 11 Rods 38.50

*Also Available in Metric*

*Note: Sent with Jewel Bearings and Case unless otherwise ordered.*

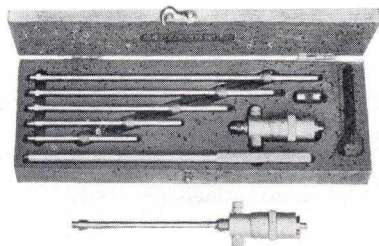
Packed 1 in a Box



# STARRETT INSIDE MICROMETERS — Solid Rods

## NO. 124

*With Satin Chrome Finish*



Satin Chrome Finish is an outstanding feature on these quality inside micrometers which makes markings stand out sharp and clear under any illumination. This improved finish on the head not only eliminates glare, but gives faster, more accurate readings plus superior corrosion resistance. No. 124 Inside Micrometers are available in four different models with an overall range from 2 inches up to 32 inches inclusive as listed below. No. 124A and No. 124B heads have  $\frac{1}{2}$  inch

movement and the No. 124C head 1 inch movement. Threads are hardened, stabilized and ground from the solid. All heads have Quick Reading graduations in thousandths of an inch with thousandths lines numbered.

The desired range is obtained by adding extension rods with lapped ring gages to the micrometer head. Extension rods are provided with a shoulder, against which the rods are set accurately in the micrometer head. The zero mark on the shoulder should coincide with the zero mark on the micrometer head. A standard gage or ring slips on the rods against the shoulder, to further extend the rod. All contact surfaces are hardened and ground, and provision is made to compensate for wear of the screw and contact surfaces.

If desired, a convenient handle (supplied as an extra only when specified) can be furnished for insertion in the head in place of the knurled screw opposite the grooved rod-lock-screw.

### PRICES

	Without Case	With Case
No. 124A Range 2 to 8 inches. With micrometer head, 6 rods, one $\frac{1}{2}$ inch ring gage, and wrench .....	\$12.75	\$15.50
No. 124B Range 2 to 12 inches. With micrometer head, 10 rods, one $\frac{1}{2}$ inch ring gage, and wrench .....	16.25	20.25
No. 124C Range 8 to 32 inches. With micrometer head, 4 rods, one 1 inch gage and two 2 inch gages and wrench .....	22.50	28.50
No. 124D Range 2 to 32 inches. Consists of Sets No. 124A and 124C .....	35.25	42.75
Handle, extra .....	1.25	

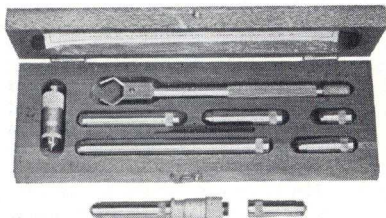
*Also Available in Metric*  
Furnished with Case Unless Otherwise Ordered.

Packed 1 Set in a Box.

# STARRETT INSIDE MICROMETERS—Tubular Rods

## NO. 823

*With Satin Chrome Finish*



This inside micrometer has Satin Chrome Finish on the head — eliminates glare, retards corrosion and increases speed and accuracy of readings. Markings stand out sharp and clear under any illumination.

A highly useful tool for internal linear measurements

such as measuring cylinders, rings, setting calipers, comparing gages, and measuring parallel surfaces. Available in two sizes which will measure down to  $1\frac{1}{2}$  inches minimum and with extension rods up to 8 inches and 12 inches maximum inclusive. Threads are hardened, stabilized and ground from the solid. Micrometer heads have  $\frac{1}{2}$  inch movement and Quick Reading graduations in thousandths of an inch with all thousandths lines numbered.

The extension rods are made of steel tubing, centerless ground, and are light weight yet extremely rigid. Rods are approximately  $\frac{3}{8}$  inch diameter to meet the requirements of mechanics who prefer this larger diameter. By removing the hardened and ground anvil ends of the micrometer head, the rods may be attached to either or both ends of the micrometer as preferred, for the best balance, feel and easy reading. Each rod is marked with the length and may be individually adjusted for wear by the hardened and ground anvil at the end.

A positive adjustment for wear of the micrometer head or for sense of feel is made through the Starrett friction sleeve by a spanner wrench that is furnished with each set. A patented handle, also furnished with each set, may be clamped to the knurled sections or anywhere along the smooth section of the head or rods to provide the correct reach and balance.

### PRICES

No. 823A	Range $1\frac{1}{2}$ to 8 inches. With micrometer head, 5 rods, wrench and handle. Complete Set, in finished wood case .....	\$19.50
No. 823B	Range $1\frac{1}{2}$ to 12 inches. With micrometer head, 8 rods, wrench and handle. Complete Set, in finished wood case .....	24.25

*Also Available in Metric.*

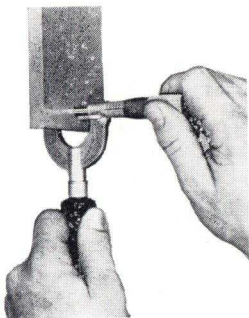
Packed 1 Set in a Box.

# STARRETT STEEL MILL MICROMETER

## NO. 205

*For Gaging Hot Metal Sheet in Steel Mills*

*Range 0 to 1 inch — No-Glare Rust Resistant Satin Chrome Finish*



This Steel Mill Micrometer is specifically designed for gaging hot metals and has many features for safer, faster and more accurate measurements. Consisting of a micrometer having rugged construction throughout to which is attached a convenient wooden handle correctly shaped for a firm grip, the No. 205 Steel Mill Micrometer can be comfortably held with the hand at a safe distance from the hot metal. Setting for any measurement is maintained by means of a wing head lock nut which is easy to lock or release with heavy gloves. Lock nut is reversible.

No-glare Satin Chrome Finish makes markings stand out sharp, clear and easy to read under any illumination — no squinting either in dim light or bright sunlight — and gives high resistance to stains and corrosion. Another feature is the extra long bevel on the thimble with heavy-cut graduations in thousandths of an inch. Convenient decimal equivalents are stamped on the frame.

The heavy duty spindle is .270" diameter and has one piece construction. Threads are hardened, stabilized and ground from the solid for lasting precision. Both spindle and anvil are beveled to easily slide onto the work. This micrometer can be quickly adjusted by the anvil lock screw or by simple sleeve adjustment.

### PRICE

No. 205 Range 0-1 inch, Satin Chrome  
Finish, with Wing Head Lock  
Nut .....\$18.00

Packed 1 in a Box.



## STAINLESS STEEL MICROMETERS

### No. 1231 — Range 0-1"

*Stainless Steel Complete  
With "Hi-Micro" finish on Anvil and Spindle Contacts.*



Another new micrometer and a new design. Note the tapered frame for convenient measuring in narrow slots and the modified form inside of frame. All parts of stainless steel. Threads hardened, stabilized, and ground from the solid. Width at anvil end of frame approximately 5/16". Has lock nut, and ratchet stop. With ten-thousandths reading.

No. 1231

Price \$22.50

Case only — \$1.85  
Packed 1 in a box.

## MICROMETER

### No. 1230 — Range 0-1"

Same as above but with thousandths reading.

No. 1230 Thousandths reading

Price \$19.75

Case only \$1.85  
Packed 1 in a box.

## MICROMETER

### No. 1213 — Range 1-2"

Same as No. 1231, with ten-thousandths reading, but with range 1-2".

No. 1213, with 1" standard

Price \$27.00

Case only \$2.50  
Packed 1 in a box.

## MICROMETER

### No. 1212 — Range 1-2"

Same as No. 1230, with thousandths readings, but with range 1-2".

No. 1212, with 1" standard

Price \$24.25

Case only \$2.50  
Packed 1 in a box.

*Above numbers sent without case unless otherwise ordered.*

# STARRETT MICROMETER WITH ROUNDED ANVIL NO. 211

*Range 0 to 1 inch — Satin Chrome Finish — Black Enameled Frame*

An extremely useful micrometer for measuring the wall thickness of bearings, tubing and various cylinders having walls up to 1 inch thick and any diameter all the way down to  $\frac{5}{8}$  inch I.D. Since the anvil contact is rounded, any of the above curved surfaces can be accurately measured in thousandths of an inch.

The frame is strongly ribbed and finished in smooth black enamel which cleans up easily. Thimble and sleeve have rust resistant no-glare Satin Chrome Finish which makes markings stand out sharp and clear and easy to read under any illumination. Graduations are Quick Reading with every thousandth numbered and convenient decimal equivalents are stamped on the thimble. Spindle has one piece construction with threads hardened, stabilized and ground from the solid. The spindle face also has Hi-Micro mirror-like finish for lasting precision. Simple sleeve adjustment.



No. 211 with Rounded Anvil .....	\$10.75
No. 211 with Rounded Anvil, with Case ....	12.60

*Also Available in Metric*

Sent without case unless otherwise ordered.

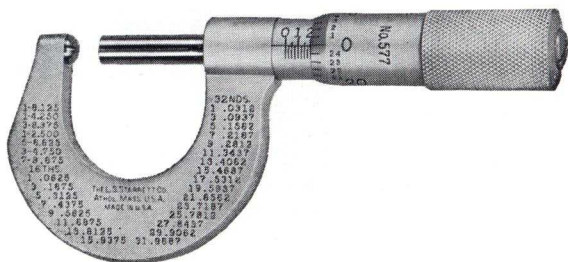
Packed 1 in a Box.

# STARRETT MICROMETER WITH ROUNDED ANVIL NO. 577

*Range 0 to 1 inch — Satin Chrome Finish*

This micrometer has a rounded anvil which makes it possible to measure in thousandths of an inch the wall thickness of tubing, half bearings, and full bearings and various cylinders with walls up to 1 inch thick and diameters all the way down to  $\frac{3}{8}$  inch inside diameter.

The full finished frame as well as the thimble and sleeve have rust-resistant no-glare Satin Chrome Finish which makes markings stand out sharp, clear and easy to read under any illumination. Convenient decimal equivalents are stamped on the frame and graduations are Quick Reading with every thousandth numbered. Lasting precision is assured by the one-piece spindle with threads hardened, stabilized and ground from the solid. Hi-Micro finish on end of spindle and simple sleeve adjustment are other features.



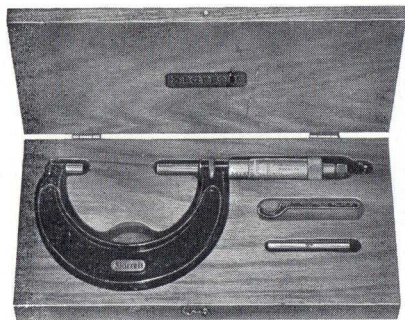


# STARRETT MICROMETER

## NO. 436

*Range  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches in thousandths*

*For Measuring Crankshafts*



This micrometer is designed for automotive work and especially for crankshaft measuring. Handles most crankshaft diameters since the micrometer has a 3 inch frame with a range from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches.

The reading point, the longitudinal line on the sleeve, is on the *under side* of the thimble, *plainly visible*

*while measuring.* Every mechanic will value this feature for measuring between webs, as well as the anvil and spindle lengths which are specially designed for crankshaft measurements.

Frame is finished in smooth black enamel and cleans up easily. Thimble is stamped with convenient decimal equivalents. Rust-resistant no-glare Satin Chrome Finish on sleeve and thimble makes markings stand out sharp and clear under any illumination. Spindle has one piece construction with threads hardened, stabilized and ground from the solid. Anvil and spindle faces also have Hi-Micro finish for lasting precision. Furnished with ratchet stop and lock nut.

- |         |  |         |
|---------|--|---------|
| No. 436 | $1\frac{1}{2}$ " to $2\frac{1}{2}$ " with ratchet stop, lock nut and stand-<br>ard in finished wood case ..... | \$16.00 |
| No. 436 | $1\frac{1}{2}$ " to $2\frac{1}{2}$ " with ratchet stop, lock nut and stand-<br>ard, without case .....         | \$14.00 |

*Also Available in Metric*

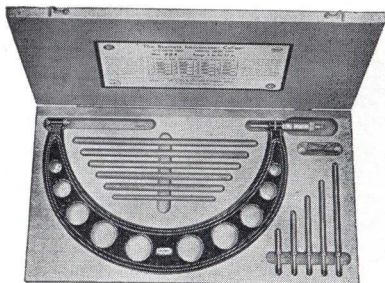
Sent in finished wood case unless otherwise ordered.

Packed 1 in a Box

# STARRETT MICROMETER

## NO. 224

*Interchangeable Anvils*  
*Range 6 to 12 inches in thousandths*



This one micrometer can be used for all measurements from 6 inches up to 12 inches by means of interchangeable anvils. A highly useful micrometer, it combines in one tool many outstanding features that make it ideal for all-around measuring in the 6 to 12 inch range.

Six anvils are furnished with the micrometer, all of which are readily interchangeable and provide the full range in steps of one inch. Each anvil is marked to show capacity and is fitted with an adjusting collar which compensates for wear and acts as a seat when clamped in position by a locking collar. Suitable wrenches are furnished to make necessary adjustments.

The micrometer frame is made from a steel forging and is finished in black enamel. Sleeve and thimble have rust-resistant, no-glare Satin Chrome Finish which makes markings stand out sharp and clear and easy to read under any illumination. Figures are Quick Reading for positive identification and decimal equivalents are stamped on the thimble. Other features include one piece spindle with threads hardened, stabilized and ground from the solid for lasting precision and simple sleeve adjustment. A lock nut positively maintains the setting of any reading.

The complete set consisting of a 6-12 inch micrometer, six interchangeable anvils, six standards, and wrenches is packed in a durable and finely finished wood case. No. 224 micrometers are also available in other ranges from 0 up to 24 inches.

No. 224 with 6 interchangeable anvils, 6 measuring rods,  
lock nut and ratchet stop in wood case ..... \$82.25

*Also Available in Metric*

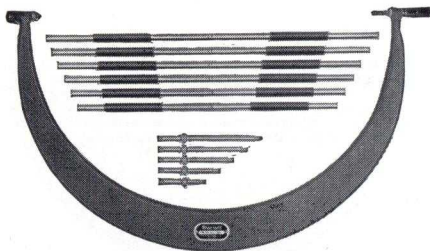
Packed 1 in a Box

# STARRETT TUBULAR MICROMETER

## "C" or Bow Type

### No. 724

*With interchangeable anvils*



With lightness where it counts and for measurements 12" and up. The frames are made of steel, formed, welded and hollow, providing the lightest possible weight. Standard co-efficient of expansion. Rigidity beyond question. Such features enable more sensitive positioning and thus insure better accuracy. Hardened steel spindle; threads ground from solid. This style made with interchangeable anvils. Frames have black crackle finish and micrometer heads have Satin Chrome Finish. All micrometers have lock nuts.

#### PRICES

Cat. No.	Range	Comp. with case and standards
724	12-18"	\$ 73.00
	18-24"	92.75
	24-30"	137.00
	30-36"	182.00
<i>Also Available in Metric</i>	36-42"	274.50
	42-48"	315.75
	48-54"	368.75
	54-60"	435.75

*Ranges other than shown, also sizes larger than 60 inches, made on special orders.*

*Note:* We do not recommend ratchet stops nor ten-thousandth readings on these micrometers. Sent with standards and case unless otherwise ordered. (Standards are solid type with rubber handles up to 35" inclusive. Longer standards are tubular type with fibre handles.)

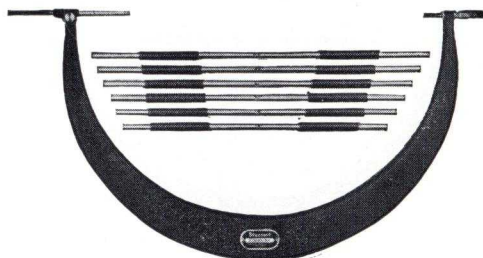


# STARRETT TUBULAR MICROMETER

## No. 726

### "C" or Bow Type

*With Sliding Anvil*



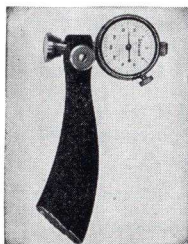
This micrometer is identical to the No. 724 shown on the previous page except that it has a sliding anvil with a 6-inch adjustment. Large clamping nut securely locks the anvil to position.

#### PRICES

Cat. No.	Range	Comp. with case and standards
726	12-18"	\$ 67.00
	18-24"	85.00
	24-30"	107.50
	30-36"	142.75
	36-42"	222.50
	42-48"	256.75
	48-54"	304.00
	54-60"	369.25

*Also Available  
in Metric*

*Ranges other than shown, also sizes larger than 60 inches, made on special orders.*



*Note:* We do not recommend ratchet stops nor ten-thousandth readings on these micrometers. Sent with standards and case unless otherwise ordered. (Standards are solid type with rubber handles up to 35" inclusive. Longer standards are tubular type with fibre handles.)

← This illustration conveys to the reader the endless possibilities of dial indicators plus special measuring contacts in connection with all styles of tubular micrometers. Our Special Order Department is ready to consider your requirements.

# STARRETT TUBULAR MICROMETER

## No. 736

### "C" or Bow Type

*With fixed anvils*



*Also Available  
in Metric*

This micrometer has the same characteristics as the No. 724 and No. 726 but with fixed anvil. Regularly manufactured in sizes from 12" to 24" inclusive in 1-inch steps.

#### No. 736 Capacity

12" to 13"  
13" to 14"  
14" to 15"  
15" to 16"  
16" to 17"  
17" to 18"

18" to 19"  
19" to 20"  
20" to 21"  
21" to 22"  
22" to 23"  
23" to 24"

*Prices for above sizes and larger quoted on application.  
Sent with standard and case unless otherwise ordered.*

# TUBULAR MICROMETER

## No. 725

### Bar or "U" Type



*Also Available  
in Metric*

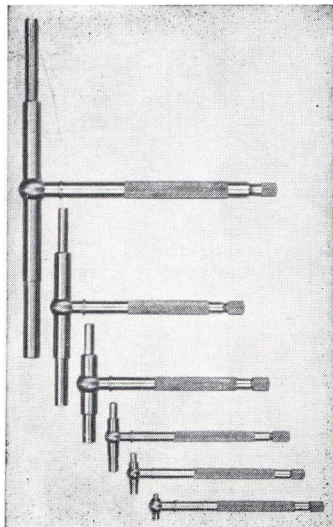
There are many applications for this "bar" or "U" type micrometer. Same finish and features as No. 724. *Made only on special order.* Made with fixed, sliding or interchangeable anvils or dial indicator heads and in steps of 6 inches.

We supply this type from 12" range to 168" range.

Sent with standards and case unless otherwise ordered.

# STARRETT TELESCOPING GAGES NO. 579

*With Automatic Self Centering Handle*  
*Six Sizes — Range 5/16" to 6"*



This gage originates from our original No. 229 telescoping gage thus providing a choice of handle in the center or at the side. Both gages are equally popular for determining the true size of holes, slots and recesses.

- The handle on No. 579 gages is rigidly attached to the contact plunger body, thus eliminating undesirable handle adjustment and looseness, and is automatically self centering at all times. Both contact plungers telescope within each other, providing a rigid, positive seat for the contact plungers in all positions. Constant spring tension gives uniform contact pressure and both plungers are easily locked at any desired setting by a slight turn of the knurled screw in the end of the handle. Ends of the plungers are rounded to give true diameter measurements and are hardened and ground.

Available in six sizes, either in complete sets or singly, to measure from 5/16" to 6".

## PRICES

No. 579-A	Range 5/16 to 1/2 inch, each .....	\$2.75
No. 579-B	Range 1/2 to 3/4 inch, each .....	2.75
No. 579-C	Range 3/4 to 1 1/4 inches, each .....	3.20
No. 579-D	Range 1 1/4 to 2 1/8 inches, each .....	3.60
No. 579-E	Range 2 1/8 to 3 1/2 inches, each .....	4.50
No. 579-F	Range 3 1/2 to 6 inches, each .....	5.50
Set of Four (A, B, C, D in red plastic case)		
	Range 5/16" — 2 1/8" .....	13.50
Set of Six (A, B, C, D, E, F in red plastic case)		
	Range 5/16" — 6" .....	24.10

*Note:* Longer handles can be furnished on request.

Packed 1 Gage or Set in a Box



# STARRETT HOLE GAGES (Short Type)

## No. 830

*Patented*

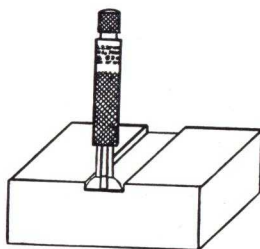
An "Offshoot" from our popular small hole gages No. 829, and equally adaptable. The features of these gages are their short length and the form of the contacts. All sizes approximately 2 inches long. Their short length is very convenient in close quarters — for example, measuring between work and machine spindle. The special form of contact end, like no other tool, makes it possible to check size of shallow holes, slots, etc.



	Range	Price, Each
No. 830-A.....	.125" - .150"	\$ 2.70
No. 830-B.....	.150 - .200	2.80
No. 830-C.....	.200 - .300	2.85
No. 830-D.....	.300 - .400	2.95
No. 830-E.....	.400 - .500	3.00
Set of Five (5) in Red Plastic Case .....		15.50

Packed 1 set in a box.

Checking size of  
shallow slot.



# STARRETT SMALL HOLE GAGES

## NO. 831

Patented

*For Gaging Deep and Shallow Holes, Slots, etc.  
Four Sizes — Range .125 to .500 inch*



Holes, slots, grooves and recesses ranging from .125" to .500", which are too small or shallow to use Starrett No. 229 or No. 579 Telescoping Gages, can be accurately measured with these new Small Hole Gages — companion gages to the well known No. 830 line. The gaging surface is formed with a flat bottom, permitting use in even the most shallow holes, slots and recesses.

These gages are adjusted to size by a convenient knurled knob at the end of the gage which provides smooth and sensitive adjustment and feel, thus insuring more accurate measurements. Final size in thousandths of an inch is obtained by using a micrometer over the contacts.

Check these added features which contribute to better shallow gaging. Contacts hardened for long life. Contact radius is less than any hole to be measured, insuring accurate gaging by means of two point contact. A safety stop prevents possible breakage by limiting travel within the range of the gage. Length of each gage is designed for the best possible balance.

These gages are available in four sizes, either as a complete set in a protective red plastic case or separately.

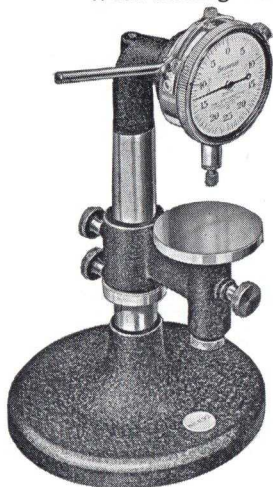
### PRICES

No. 831 A, Range .125" — .200", Length 2-13/16"	\$2.70
No. 831 B, Range .200" — .300", Length 3 1/8"	2.80
No. 831 C, Range .300" — .400", Length 3 3/8"	2.90
No. 831 D, Range .400" — .500", Length 3-9/16"	3.00
Set Complete, No. 831 A, B, C, D, in Red Plastic Case	12.60

Packed 1 in a Box — Individually or Sets

# STARRETT UNIVERSAL DIAL BENCH GAGE NO. 652

*With Sliding Table and Fine Adjustment*



The Starrett No. 652 Universal Dial Bench Gage is designed for fast, accurate and economical inspection of all types of small parts. Plus or minus variations from size in .0005 of an inch can be read off instantly from the indicator. Readings are uniformly accurate because of predetermined spring contact pressure entirely independent of the operator's 'feel'. Versatile design makes it equally suitable for use as a comparator or a thickness gage to measure rubber, textile, paper, metal parts, leather, veneer, mica, celluloid, cardboard, fabrics, etc. on either flat, curved or irregular surfaces. Compact and portable, it is a highly useful gage for bench inspection or the production line.

The dial indicator is provided with a convenient hand lever which is pressed down to lift the spindle and released to contact the work. Left hand operation permits easy handling of work with the right hand. (If desired, lever can be furnished at right.) The dial can be adjusted relative to zero and then locked with the bezel clamp. Although other

styles of indicators can be supplied, the No. 25-B is regularly furnished, graduated .0005", dial reading 0-25-0, range .125".

The ground and lapped table is adjustable vertically on the ground post to suit various thicknesses of work and is locked in approximate position by the table bracket screw. A sliding ring on the post is also locked in position below the bracket and permits swinging the table to either side. Final setting of the table is accurately made by a fine adjusting screw, using a locking screw to maintain the desired position.

Precision made throughout to rigid Starrett standards.

## SPECIFICATIONS

Max. Vertical Capacity .....	13/4"	Column Diameter .....	13/16"
Max. Throat Depth .....	1 1/8"	Base Diameter .....	5"
Table Diameter .....	2"	Height, Overall .....	9 1/4"
Table Fine Adjustment .....	1/8"	Weight, Net (Approx.) .....	5 lbs.

	Without Case	With Case
No. 652 with No. 25-B Indicator, Plain Bearings .....	\$38.00	\$43.00
No. 652 with No. 25-B, Jewel Bearings .....	41.00	46.00

Note: Sent with Plain Bearings unless otherwise specified.

Note: Special sizes and shapes of contact points and tables furnished on request.

Note: Can be furnished with tolerance hands, extra.....\$2.50

No. 652-M Metric — Same as above except the Dial Indicator is graduated in .01 MM (1/100 MM) reads 0-50-0 and has a spindle travel of 2 1/2 MM. Prices same as above.

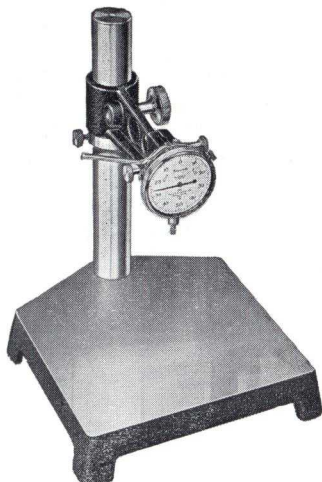
Note: Sent with Finished Wood Case Unless Otherwise Ordered.

Packed 1 in a Box



# STARRETT DIAL COMPARATOR NO. 653

*With Fine Vertical Indicator Adjustment*



The Starrett No. 653 Dial Comparator can be used to good advantage for inspection operations, in tool rooms and machine shops on a wide variety of applications. Designed for general utility, it has a rigidly ribbed base-platen precision ground to close limits and approximately 8x9 inches in area which accommodates all types of work as well as various V-blocks and special fixtures.

The dial indicator bracket is held on the end of a strongly ribbed, rigid bracket adjustable vertically on a substantial, ground post mounted square with the base platen surface. A large diameter screw securely locks the bracket in the position desired and a sliding ring with locking screw below the bracket permits positioning the indicator to either side for measurement at any point relative to the base. The ring acts as a safety feature preventing accidental dropping and damage to the indicator. Final setting of the indicator can be accurately and quickly made by a fine adjustment provided by means of a knob operated rack and pinion at the end of the indicator bracket. A second

screw locks the indicator in the exact position desired.

Operation of the dial indicator is done by a convenient hand lever which is pressed down to lift the spindle and released to contact the work. Left hand operation permits easy handling of work with the right hand. (If desired, lever can be furnished at right.) Plus or minus variations from size in .001" can be read off instantly from the indicator and readings are uniformly accurate because of predetermined spring contact pressure entirely independent of the operator's "feel". The dial can be adjusted relative to zero and then locked with the bezel clamp. Indicator regularly furnished is our No. 655-C, graduated .001", dial reading 0-50-0, range .250". Other types of indicators also available if specified.

Made to rigid Starrett standards of precision with especially rugged construction throughout to maintain rigidity and permanent accuracy.

## SPECIFICATIONS

Maximum Vertical Capacity .....	9 $\frac{1}{4}$ "	Column Diameter .....	1 $\frac{1}{2}$ "
Maximum Throat Depth .....	5"	Height overall .....	13 $\frac{3}{8}$ "
Base Platen Size .....	9" x 9 $\frac{5}{8}$ "	Weight (approx.) .....	16 lbs.
Indicator Vertical Adjustment .....	1-5/16"		

No. 653 with No. 655-C Indicator, Plain Bearings .....	\$45.00
No. 653 with No. 655-C Indicator, Jewel Bearings .....	48.00

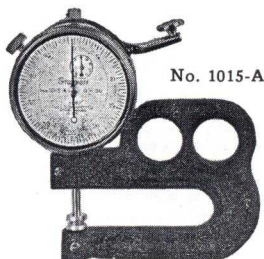
*Also Available in Metric.*

**Note:** Sent with Plain Bearings unless otherwise specified.

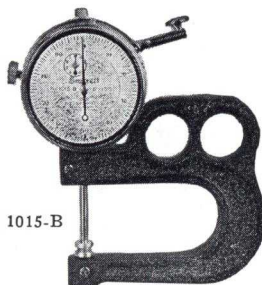
Packed 1 in a Box.

# STARRETT PORTABLE DIAL HAND GAGE

## NO. 1015-A and 1015-B



No. 1015-A



No. 1015-B

Highly accurate, yet compact, portable and designed for hand use, Starrett No. 1015-A and 1015-B Portable Dial Hand Gages are ideal tools for conveniently measuring the thickness of a wide range of materials and small parts. Easily held in one hand by 'natural grip' finger holes, they will quickly measure plywood, rubber, textiles, paper, metal parts, leather, veneer, mica, celluloid, cardboard, fabrics, etc. These gages can also be used for direct reading of plus or minus variations in size if furnished with balanced dials.

Two styles are available; the No. 1015-A with  $\frac{1}{2}$  inch capacity and the No. 1015-B with 1 inch capacity. Both are easily operated by simply pressing down the thumb lever which raises the spindle permitting work to be inserted between the anvils. Release of the thumb lever causes the spindle anvil to contact the work thus giving a highly accurate size reading because anvil pressure is independent of the operator. Anvils are  $\frac{3}{4}$  inch diameter flat and hardened, ground and lapped. Ample throat capacity of  $2\frac{1}{2}$ " is provided.

Measurements are read directly from the dial. The No. 1015-A is furnished with No. 25-E indicator graduated .0005", dial reading 0-50, range  $0\frac{1}{2}$ ". The No. 1015-B is furnished with No. 25-F indicator graduated .001", dial reading 0-100, range 0-1". Both have a double dial with a tell-tale showing 10 revolutions of the large hand. The dial can be adjusted relative to zero and then locked with the bezel clamp screw. Although these two indicators are regularly furnished, other types are available if specified and also special sizes and shapes of anvils.

	Without Case	With Case
No. 1015-A Capacity $0\frac{1}{2}$ inch with Jewel Bearings .....	\$35.00	\$40.00
No. 1015-B Capacity 0-1 inch with Jewel Bearings .....	39.00	44.00

*Also Available in Metric.*

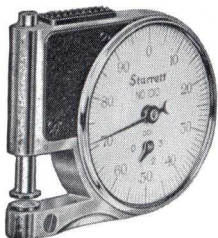
Note: Sent with Leather Case unless otherwise specified.

Note: Special sizes and shapes of anvils can be furnished on request.

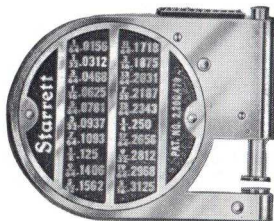
Packed 1 in a Box.

# STARRETT DIAL INDICATOR POCKET GAGE NO. 1010

Patented



No. 1010 — Front



No. 1010 — Back

The No. 1010 is an attractive and ideal gage for inspectors, purchasing agents, salesmen, etc., about the size of a thin watch and with a dial graduated to read in thousandths of an inch and a range of 0 to  $\frac{3}{8}$ ". With proper tension on measuring anvils, it will be found ideal for measuring the thickness of paper, leather, rubber, metal sheets, wire, plastics, etc. Note the gage has a small "rev" counter which records each revolution of the large hand, .100". The gage just naturally fits into the curve of thumb to index finger, a slight pull on the serrated plate with the latter raising the spindle. Note also fractions and decimal equivalents on the back of the case. The case is a die casting, chrome plated. Has non-breakable crystal. Also available in model No. 1010-E similar to No. 1010 but graduated .0005", dial reading 0-50, range 0- $\frac{3}{8}$ ".

No. 1010, graduated .001", dial reading 0-100, range 0- $\frac{3}{8}$ ", with plastic case	\$18.00
No. 1010-M, graduated .01 MM., dial reading 0-100, range 0-9 MM., with plastic case	19.00
No. 1010-E, graduated .0005", dial reading 0-50, range 0- $\frac{3}{8}$ ", with plastic case	18.00

NOTE: All models available with round contact points at slight additional cost.

PACKED — 1 in a box

## LEATHER MEASURING POCKET GAGE No. 1010-L

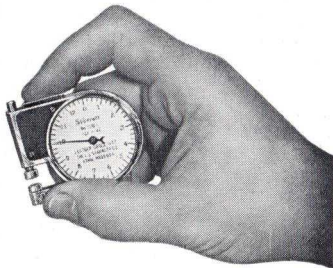
Patented

This light, thin, compact leather gage is convenient to use, fits handily in the pocket and is an ideal gage for inspectors, manufacturers and distributors, purchasing agents, salesmen, etc., to quickly and accurately measure the thickness of leather and similar materials.

Although similar in appearance and operation to the No. 1010 described above, the No. 1010-L is designed specifically for the leather industry and measures thickness directly in leather ounces. The gage has a range of 0-13 oz. with graduations in  $\frac{1}{4}$  oz., dial reading 0-13 oz. A convenient table on the back of the case gives the decimal equivalent of any oz. reading.

No. 1010-L, graduated  $\frac{1}{4}$  oz., dial reading 0-13 oz., range 0-13 oz., with plastic case \$18.00

PACKED — 1 in a box



# STARRETT LAST WORD® TEST INDICATOR NO. 711-E

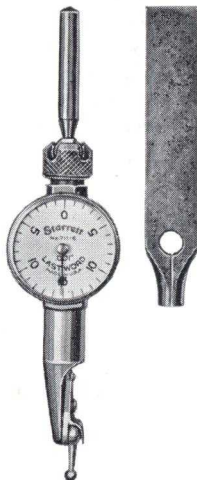
*With Universal Friction Holder  
and Universal Shank*

Toolmakers, machinists, and set-up men looking for greater versatility in a test indicator, can meet their exact requirements with the new No. 711-E LAST WORD Indicator. Completely flexible — with tighter swing, new features, new attachments — it can be used for precise indicating on countless jobs — either in machining, layout, checking or inspection operations.

The new Universal Swivel Friction Holder on the end of the body permits using the indicator in the chuck of jig borers, milling machines or boring machines. By means of the ball swivel joint, the indicator is adjustable to sweep any hole or other surface within its range. A Universal Shank also supplied can be attached to the end of the friction holder allowing indicator to be used on 18 and 24 inch vernier height gages, on lathes in the tool post holder, on milling machines and other applications. The optional attachment shown on page 28 also permits use of the 711-E on 12 inch vernier height gages.

Additional features include a switch lever on the body to reverse the action; hard chrome plated contact point with ratchet joint permitting instant movements to any position; removable inspection hole cover screw for minor adjustments.

The No. 711-E has an adjustable dial  $15/16$ " diameter, range .030 inches, reading 0-15-0 and is graduated in thousandths. No. 16 Contact Point with .120" diameter point is regularly furnished. Precision made throughout to rigid Starrett standards.



## PRICES

No. 711-E (Plain) with Universal Holder, Universal Shank and Case .....	\$24.50
No. 711-ME Metric, Same as above except dial is graduated to read .01MM (1/100MM) .....	\$24.50
No. 711-E (Complete) or No. 711-ME, with Case and all attachments listed on page 28 .....	\$32.00

*Case Only, to Hold No. 711-E or No. 711-F and All Attachments \$1.50*

*Sent with Case Unless Otherwise Ordered*

*Packed 1 in a Box*



## OPTIONAL ATTACHMENTS

### For No. 711-E LAST WORD Test Indicator



- No. 31-32-33 — Long and Short Arm —** For use with Coupling below providing additional flexibility and longer extension. Also can be used with Universal Shank. Price .....\$1.05



- No. 46 — Coupling —** For use with Long and Short Arm permitting offset position of indicator. Price .....\$0.65



- No. 28-29-30—Body Clamp Complete—**Permits indicator to be held from body. Price .....\$1.40



- No. 47 — Surface Gage Attachment —** Fits in place of ball shank of Universal Friction Holder for attaching indicator to 9 inch, 12 inch or 18" surface gages. Price .....\$0.65



- No. 45 — Vernier Height Gage Attachment —** Interchangeable with Universal Friction Holder for attaching indicator to 12 inch height gages. (use regular Universal Shank furnished with indicator on 18 inch and 24 inch height gages.) Price .....\$1.25



- No. 16, A, B — Contact Points —** Available in three sizes for various types of work — large and small. No. 16 Contact is regularly furnished on indicator. Also available with Carbide balls for severe applications. Prices on request.

#### Prices

No. 16 A	.035" diam.	\$1.35
No. 16 B	.062" diam.	1.35
No. 16	.120" diam.	0.95

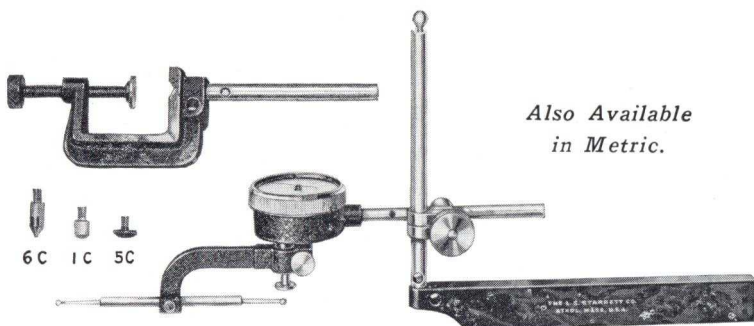


- No. 711-EA Attachment for adapting No. 711-F LAST WORD Indicator to Jig Borer Work —** By inserting this new attachment in the end of the No. 711-F body in place of the end plug, the No. 711-F LAST WORD Indicator can be quickly adapted for use in the chuck of jig borers, milling machines and boring machines. Price .....\$2.50

# STARRETT DIAL TEST INDICATOR

No. 645

Heavy Duty



The No. 645 Universal Dial Test Indicator has a spiral type mechanism of unusually rugged construction. It is particularly adapted for the more severe applications around machinery and for general tool work. Sensitive and accurate, with clear and distinct graduation, it is easily read. Actually, it is similar to our No. 196 but built more rugged throughout for heavy duty.

The indicator is graduated in thousandths, reads 0-50-0, and has a range of .200", two complete revolutions of the hand. The dial is adjustable so that the 0 mark may be moved to any position in relation to the hand and the indicator is equipped with a bezel clamp.

The F attachment, which is our No. 670-B, (See page 30), greatly increases the utility of the Indicator for internal work and permits checking to depths of 1-11/16". The No. 670-A Attachment which is for depths to 13/16" can also be used with this indicator. Note the new style No. 645 G patented clamp with tapped holes to receive rod in many different positions. With the tool post holder H and sleeves K and L, all types of mountings and indication are possible.

The rod or shank for holding indicator is 1/4" in diameter and 3 1/2" long and by using either the No. 645-K or No. 645-L sleeve the indicator can be attached to any surface gage.

No. 645-A	Indicator complete with attachments, as shown, in fitted wood box...	\$23.75
No. 645-B	Indicator only .....	18.25
No. 645-F	Hole attachment .....	3.75
No. 645-G	Clamp, 1-5/16" capacity, flat or round .....	1.75
No. 645-H	Tool Post Holder, 3/8" x 3/4" x 6", with upright spindle .....	1.25
No. 645-K	Sleeve complete, 1/4" and 5/16" holes .....	1.25
No. 645-L	Sleeve complete, 1/4" and 3/8" holes .....	1.25
Extra	Contact Points, Nos. 1C, 5C, and 6C, each .....	.30
No. 645-A	Indicator complete, with No. 645-K Sleeve, sent unless otherwise ordered.	
No. 645 Indicator can also be furnished with dial reading 0-100 when so specified, at no extra cost.		

# STARRETT

## SHOCK ABSORBING ANVIL (Contact Point)

### No. 28

*Patent Pending*



This is a simple but effective development where the internal spring in the anvil absorbs any sudden blow or shock. This style shockless point also acts as a solid type contact point when indicator is used normally, yet eliminates damage if subjected to a sudden impact, as the anvil telescopes into the body of the unit. Thread size is No. 4-48 which is A.G.D. Standard, thus readily fitting all makes of dial indicators. Why pay for expensive inbuilt shock mechanism in dial type indicators?

Price — \$1.50

## INDICATOR HOLE ATTACHMENT

### No. 670

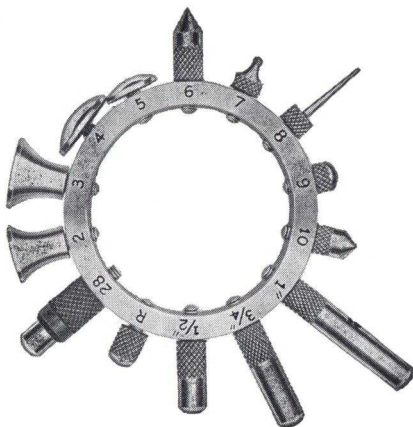
Illustrated here are improved hole attachments No. 670-A and No. 670-B which are designed to be used inside of holes and for testing other surfaces that cannot be reached with the regular indicator spindle. All have .375" hole to fit indicators made to A.G.D. Standards and, by means of the knurled screw, are securely clamped to the indicator stem. The ball which contacts the work is  $\frac{1}{8}$ " in diameter, while the diameter of the tilting arm is  $\frac{7}{32}$ " in diameter.



No. 670-A For hole depths to 13/16" .....	Price \$3.75
No. 670-B For hole depths to 1-11/16" .....	Price 3.75
Packed 1 in a box.	

**STARRETT**  
**DIAL INDICATOR CONTACT POINT SET**  
**No. 25R**

*14 Points Mounted on Aluminum Ring*



Whatever the gaging operation, the right contact point for the job can be quickly selected from this handy set of dial indicator contact points.

This set includes 14 points that fit any A.G.D. dial indicator; a regular  $\frac{1}{4}$ " long point; 9 special form points; a **SHOCK ABSORBING POINT**; and 3 extra long points  $\frac{1}{2}$ ",  $\frac{3}{4}$ " and 1" long. The points are all mounted on a light, convenient aluminum ring for safe keeping and ready selection — always on hand, always ready to use.

Precision made from high grade steel, hardened, ground and chrome plated. Interchangeable on any make of indicators made to A.G.D. standards.

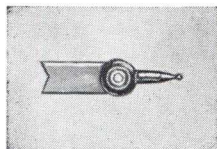
No. 25R — Complete with Ring and 14 Contact Points .....\$11.50

Packed 1 set in a Box.

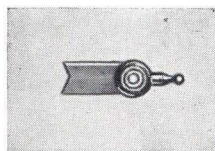


# STARRETT CONTACT POINTS

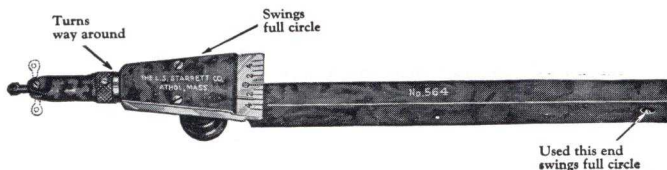
*1/32" and 1/16" Ball Diameter  
For No. 564 Universal Junior Indicator*



1/32" Contact Point



1/16" Contact Point



No. 564 Universal Junior Indicator

When the Starrett No. 564 Indicator is to be used for indicating of very small holes, slots, recesses, etc. these two supplementary points with 1/32" and 1/16" ball diameter will be found extremely useful. Either contact point can be easily inserted in place of the 1/8" ball point regularly furnished on the No. 564.

## PRICES

Contact Point for No. 564 Indicator,	
1/32" Ball Diameter, each .....	\$1.35
Contact Point for No. 564 Indicator,	
1/16" Ball Diameter, each .....	1.35

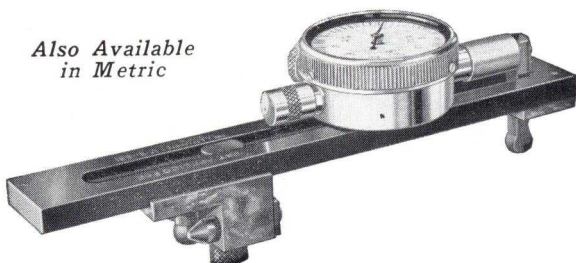
# STARRETT OUT-OF-ROUNDNESS GAGE

(For automotive maintenance)

**No. 681**

*Patented*

*Also Available  
in Metric*

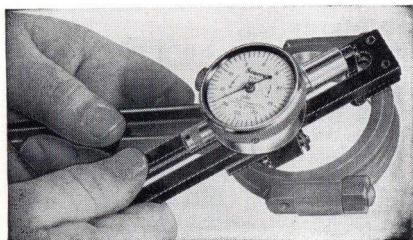


Here is a compact and easily applied gage for checking the out of roundness of holes such as connecting rod bearings, etc. Useful also for inspection of slots and vise jaws for alignment and parallelism as well as the checking of numerous types of jigs and fixtures.

Consists of a base on which is mounted a thousandth reading dial indicator, and on the bottom a positive locking adjustable slide which is readily set to the approximate hole size or gap width. The sliding head has two line contact points under spring tension insuring alignment (automatic centering) at all times. All bearing surfaces and contact points are hardened.

The indicator, our No. 81-B, is graduated in thousandths, the dial reads 0-25-0, and the spindle travel is .125". By means of the adjustable slide the capacity of the gage itself is from 1¼" to 5" for use

in holes or slots within this range. The contact points can be inserted to a depth of approximately ¾".



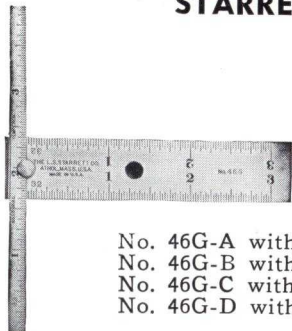
← Showing No. 681 in use  
with Connecting Rod Bearing

No. 681

Price \$39.50

Packed 1 in a box.

## STARRETT DEPTH GAGE No. 46-G



Shows our regular No. 46 depth gage with an improvement sure to be liked by pattern makers and machinists. 32nd scale graduations added to base, as illustrated.

### PRICES

No. 46G-A with 3½-inch stock and 4-inch scale.....	\$3.80
No. 46G-B with 3½-inch stock and 6-inch scale.....	4.00
No. 46G-C with 6-inch stock and 4-inch scale.....	4.40
No. 46G-D with 6-inch stock and 6-inch scale.....	4.60

Packed 1 in a box.



## SLEEVE — (Clamp or "Snug")

### No. 57-S

Patent Pending

*For surface gages. Holds indicators.*

This new positive double action upper sleeve makes possible the use of indicators as well as standard surface gage scribes with our No. 57 and 257 line of surface gages.

The A size, for use with our Nos. 57 A & B and 257 A & B Surface Gages, holds indicators Nos. 711 "Last Word", 196, 645 and 564. The B size, for use with our Nos. 57 C & D and 257 C & D Surface Gages, also holds these indicators with exception of No. 564.

The sleeves are of exceptionally sturdy construction and will not develop any looseness from long and hard use.

No. 57-SA with 5/16 inch spindle hole diameter for 9" and 12" spindles of Nos. 57 A & B and 257 A & B Surface Gages .....\$2.75

No. 57-SB with 3/8 inch spindle hole diameter for 12" and 18" spindles of Nos. 57 C & D and 257 C & D Surface Gages .....\$2.75

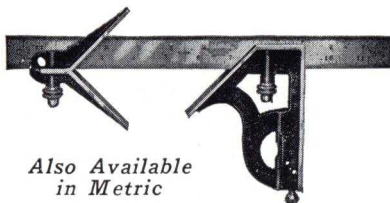
Packed 1 in a box.



No. 57-S Applied to Surface Gage and No. 196 Indicator

# STARRETT COMBINATION SQUARE No. 11

*With Fine Black Wrinkled Finish*



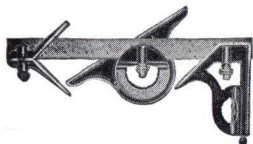
*Also Available  
in Metric*

An improved combination square with hardened blades and cast heads having a fine black wrinkled finish. These squares have a new reversible lock bolt with an improved and patented feature which permits reversing the blade without removing the bolt or nut from the head. It is only necessary to unloosen the nut by one complete turn, remove the blade to release the washer under the spring and the bolt may be reversed with one half turn of the nut.

			Price, each With Center Head	Price, each Without Center Head
No. 11	12"	Combination Square	\$ 7.35	\$5.90
No. 11	18"	Combination Square	9.00	7.55
No. 11	24"	Combination Square	10.35	8.90

## COMBINATION SETS Nos. 9 and 435

*With Fine Black Wrinkled Finish*



No. 9

*Also Available  
in Metric*



No. 435

No. 9 Combination Set consists of the No. 11 Combination Square as described above and a single type protractor head. The blade is hardened and protractor head has fine black wrinkled finish to match finish on square and center heads. No. 435 Combination Set consists of the No. 11 Combination Square as described above and a reversible protractor head. The blade is hardened and protractor head has fine wrinkled finish to match finish on square and center heads.

			Price, each				Price, each
No. 9	12"	Combination Set	\$12.00	No. 435	12"	Combination Set	\$13.85
No. 9	18"	Combination Set	13.65	No. 435	18"	Combination Set	15.50
No. 9	24"	Combination Set	15.00	No. 435	24"	Combination Set	16.85

Note: The blades of the No. 11 Combination Squares as well as the blades of the No. 9 and No. 435 Combination Sets regularly furnished with No. 4 graduation (8ths, 16ths, 32nds, 64ths) in all lengths. The 12-inch size may be supplied with No. 7 graduation (16ths, 32nds, 64ths, 100ths) in place of regular blade at no extra charge. 12", 18" and 24" blades with No. 16 quick reading graduations available at slight additional cost.

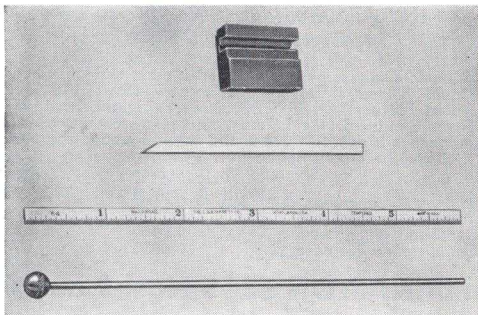
ALL of the above packed 1 in a box.



# STARRETT HEIGHT GAGE AND DEPTH GAGE SET FOR COMBINATION SQUARES

## NO. 289-C

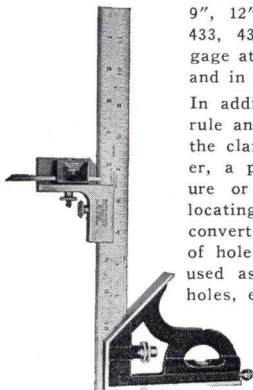
*A Highly Flexible Set For Use In Conjunction  
With No. 289-A or B*



This useful set in conjunction with No. 289-A or B converts any 9", 12", 18" and 24" No. 11, 33 combination square or No. 9, 433, 434, or 435 combination set into a height gage or depth gage at low cost. A very handy tool for patternmakers, machinists, and in the home work shop.

In addition to a clamp block, the set includes a scriber, 6 inch rule and 6 inch rod, any one of which can be quickly inserted in the clamp and locked securely in position. By applying the scriber, a practical height gage results which can be used to measure or mark off vertical distances from a plane surface, for locating center distances, scribing lines, etc. Use of the rule converts the tool into a depth gage for directly measuring depths of holes, slots, recesses in 64ths of an inch. With the rod, also used as a depth gage, the depths of smaller recesses, steps in holes, etc. can be similarly checked.

The clamp block is readily removable and can be replaced in attachment No. 289-A or B by any rule or steel square with blades up to 1 inch wide.



*Illustrating application  
of 289-C Clamp Block  
and Scriber on No. 11  
Combination Square for  
use as height gage.*

### PRICES

No. 289-C, Complete with clamp block, scriber, rule and rod ..... \$4.95  
Packed 4 in a Box.

# STARRETT STEEL SHRINK RULES

**No. 366** 11/32 inch shrink per foot

**No. 367** 13/32 inch shrink per foot

*Spring Tempered Steel — Machine Divided  
No. 4 Graduations*



Two high grade shrink rules for pattern makers requiring either 11/32 inch or 13/32 inch shrink per foot. Made of best quality spring tempered steel. Ground and machine divided with clear cut distinctive graduations, — always easy to read. No. 4 graduation in 8ths, 16ths, 32nds, and 64ths shrinkage inch. Furnished in 12 inch lengths (1" wide x 3/64" thick) and 24 inch lengths (1 1/4" wide x 3/64" thick).

## PRICES

	LENGTH 12 inch	LENGTH 24 inch
No. 366, 11/32 inch shrink per foot .....	\$3.20	\$6.40
No. 367, 13/32 inch shrink per foot .....	3.20	6.40

12" Rules packed 6 in a Box; 24" Rules 1 in a Package

# STARRETT STEEL RULE NO. 414

*General Utility Rule — English Pattern*



These tempered steel rules are designed to meet the needs of schools and shops, woodworkers, tinsmiths, metal-workers, bench work, etc. where a general utility rule of English pattern is required. Markings are heavier than conventional machine divided rules and easy to read. The two edges on both sides are graduated, the upper edges in 8ths and the lower edges in 16ths of an inch. Opposite sides measure from reverse ends. Available in lengths from 1 foot up to 6 feet as listed below, 1 1/4" wide, 1/16" thick, with a 1/4" hole in one end.

## PRICES

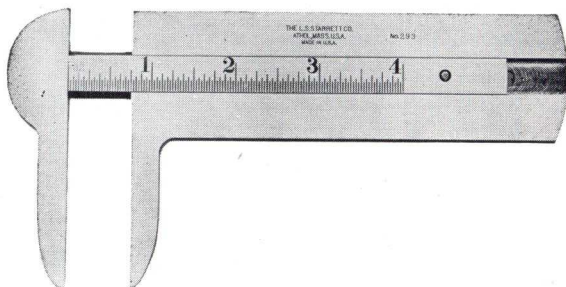
No. 414	1 foot, graduated both sides	16ths and 8ths	.....	\$2.60
No. 414	2 feet, graduated both sides	16ths and 8ths	.....	3.80
No. 414	3 feet, graduated both sides	16ths and 8ths	.....	5.40
No. 414	4 feet, graduated both sides	16ths and 8ths	.....	7.60
No. 414	6 feet, graduated both sides	16ths and 8ths	.....	13.40

Packed 1 in a Package

# STARRETT ROLLING MILL CALIPER GAGE

**NO. 293**

**HARDENED**



A rugged yet accurate caliper gage built to "take it" and specifically designed for measuring sheet and plate iron and steel, rods, rolls, etc. in rolling mills. Equally useful in steel warehouses, stock rooms and store rooms.

This gage has heavy-duty construction throughout and for extra strength the *movable jaw and slide are in one piece*. Hardened to stand up under severe usage.

The slide is graduated with deep cut easy-to-read graduations in 32nds of an inch. Thickness or diameters from 0 to 4 inches can be measured and the gage can be locked at any reading by a large diameter clamp nut. The gage is 6" long and  $\frac{7}{32}$ " thick. Jaws are  $2\frac{1}{4}$ " deep providing ample capacity. Note rounded end for tapping lightly to position. Smooth bright finish.

## PRICE

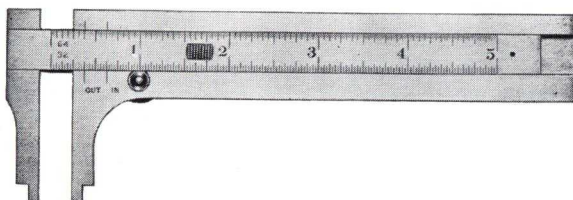
No. 293, Range 0 to 4 inches .....\$20.00

Packed 1 in a box

# STARRETT POCKET SLIDE CALIPER

## No. 1025

*Rust Proof — Made of Highest Grade Stainless Steel  
6 inch Capacity*



Another popular size in the Starrett line of pocket slide calipers. Rust-proof and stain-proof with a permanently bright finish since this quality tool is made of highest grade Stainless Steel.

Both inside and outside diameters can be accurately measured with this rule in either 32nds or 64ths of an inch by means of precision machine graduations on the slide in conjunction with "outside" and "inside" lines on the stock. Jaws are designed with straight inside surfaces for measuring outside diameters up to  $4\frac{3}{4}$ " O.D. and also have rounded nibs to measure holes from  $\frac{1}{4}$ " to 5". The reverse side of the stock is accurately machine graduated with a handy six inch scale in 32nds of an inch.

A knurled thumb piece on the slide makes it easy to open or close the jaws. The slide can be locked for any measurement by an improved, knurled clamping screw having a left-hand thread — a valuable feature as it may be locked by the thumb of the same hand in which the tool is held. A stop on the slide prevents the slide from being pulled out entirely.

Size	Depth of Jaws	Nibs when closed
6 inch	1-7/16 inch	$\frac{1}{4}$ inch
No. 1025 — 6" with Case		\$16.00
No. 1025 — 6" without Case		15.00

Note: Sent with Case unless otherwise ordered.

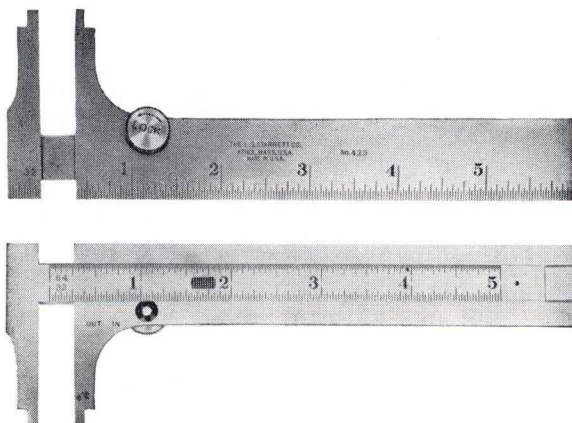
Packed 1 in a Box.



# STARRETT POCKET SLIDE CALIPER

## NO. 425

*6 inch capacity*



A New Size added to the popular No. 425 Pocket Slide Calipers.

Graduated in 32nds on the stock and 64ths and 32nds on the slide. The improved clamping device, with left hand thread (see cut), is a valuable feature as it may be locked by the thumb of the same hand in which the tool is held. The two lines on the stock as shown in lower cut enable the user to set either inside or outside measurements.

Size	Depth of Jaws	Nibs when Closed
6-inch	1 7/16 inch	1/4 inch
Price with Case	Price without Case	
\$12.00	\$11.00	

## STARRETT PIN VISES NO. 240

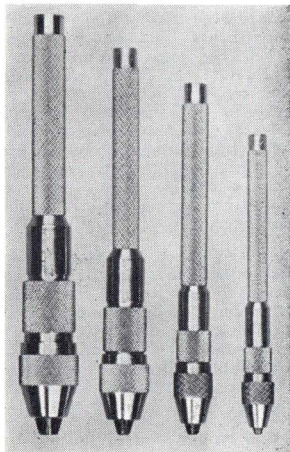
*Double Bevel Collets For Better Grip  
and Centering Without Wobble*

*Four Sizes — Capacity 0 to .200 inch*

Small stock or taps, drills, reamers, scribes, wire, files and other tools can be securely held with these pin vises. Better grip and centering without wobble is provided due to special collet design with tapers at both ends which give concentricity and maximum clamping surface. Hardened for long life.

Good design makes these vises ideal for use in either hand or machine. The handle is knurled adjacent to the chuck, permitting a firm hold with the fingers when tightening the chuck. A straight, smooth section on the handle allows the vise to be held in machine chucks or collets when used for various machining operations. The handle also has a hole extending through its entire length which will accommodate stock up to the full size capacity so that long rods can be gripped close to the end. The end of the handle is knurled to provide a sure grip and has a smaller diameter than the chuck which allows fast opening and closing and rapid rotation between the thumb and finger when filing or forming small work.

Four different sizes to hold a range of work from 0 to .200 inches diameter. Available either separately or as a complete set in a convenient red plastic case. All four vises have heavy nickel plated finish.



### PRICES

No. 240 A, Capacity 0 to .055 inch .....	\$1.00
No. 240 B, Capacity .025 to .075 inch .....	1.00
No. 240 C, Capacity .045 to .135 inch .....	1.20
No. 240 D, Capacity .110 to .200 inch .....	1.20
Set Complete, No. 240 A, B, C, D, in red plastic case .....	4.80
Individual Pin Vises packed 6 in a box; Set, 1 in a box.	

# STARRETT WIGGLER (CENTER FINDER) NO. 832

*With Offset Indicator Holder, Point,  
Ball Contact and Disc Contact*

This new Wiggler is similar to our No. 828 with added offset indicator holder and new chuck design to hold all attachments. (No. 828 will not hold offset indicator holder). One of the most useful tools in the mechanics tool box for all kinds of jig and tool work on jig boring, milling and boring machines. Four different attachments adapt the tool to countless applications and are readily interchangeable in the wiggler shank to suit the job. The attachments are clamped in the shank by a ball swivel joint which permits adjustment to an angular position or true concentricity.

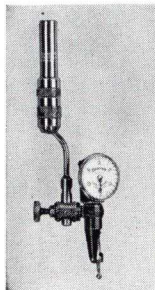
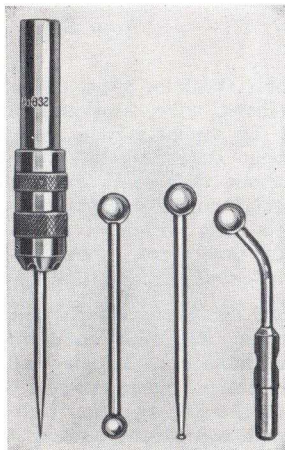
Using the offset indicator holder D in conjunction with Starrett Last Word Test Indicators, the mechanic can sweep holes or O.D.'s for checking run-out or concentricity; establish center distances; check straightness or alignment of flat surfaces; plus other jobs in machining, layout, checking or inspection operations.

With the point, working centers can be quickly and accurately located. Spring tension on the ball of the point permits guiding the point to true concentricity so that the work can be brought into perfect alignment with the machine spindle. Spring tension can be varied by an adjusting screw on the back of the shank.

The ball contact B is another attachment useful in locating work by first bringing the contact, ball diameter .250", against the work, a slot, hole, shoulder, end, etc. and then indexing the work to the desired position relative to the spindle.

Disc contact C, which has a small disc at the end .100" diameter, permits use in more confined areas such as slots, shallow holes, etc.

Shank diameter is  $\frac{3}{8}$ "; Length of shank only  $2\frac{3}{8}$ "; length with attachments approximately  $4\frac{1}{8}$ ".



## PRICES

No. 832 Shank complete with 4 attachments .....	\$3.25
No. 832-A, Shank with Point .....	1.35
No. 832-B, Ball Contact only .....	0.50
No. 832-C, Disc Contact only .....	0.50
No. 832-D, Offset Indicator Holder only .....	0.90

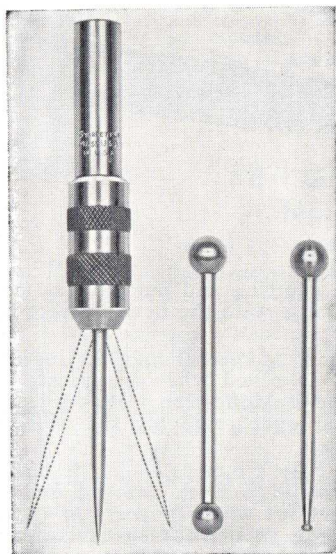
Packed 1 in a Box

Above — Illustrating use of Starrett LAST WORD No. 711-F Test Indicator on No. 832 Wiggler with Offset Indicator Holder

# STARRETT WIGGLER (Center Finder)

*with New Accessories*

**No. 828**



For jig and tool work, locating working points in milling and vertical machines. Pointer is tensioned against spring so when guided to true concentricity, work is brought to perfect alignment with machine spindle. Screw in back of shank varies tension on ball of point. Point is protected by telescoping into body when not in use.

Length when closed  $2\frac{3}{8}$ "; when open,  $4\frac{1}{8}$ "; shank diameter,  $\frac{3}{8}$ ".

The ball contact B (ball diameter, .250") permits contact with work and figuring diameter, etc., locates work to desired position.

The other part C, with the small disc at the end, .100" diameter, permits use in more confined areas, in slots, shallow holes, etc.

## PRICES

No. 828 — Complete (A, B & C).....	\$2.35
No. 828-A Shank with Point.....	1.35
No. 828-B Ball Contact only.....	.50
No. 828-C Disc Contact only.....	.50

No. 828 Complete sent unless otherwise ordered.

Packed 1 set in a box.



# STARRETT HAMMER

Drop Forged

*For Tool and Die Makers — For Light Hammering, Heading, etc.*

**No. 815**

*Patented*



Faster, easier, and more accurate spotting and punching of center lines and intersections is now possible with the new Starrett Hammer for tool makers and die makers.

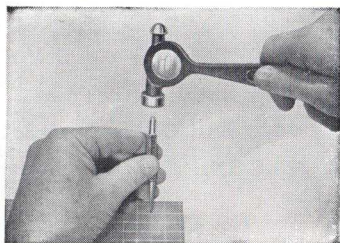
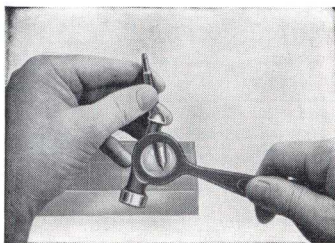
A magnifying lens built into the head of the hammer eliminates the usual fumbling and looking away involved when a separate glass and hammer are used. High-power magnification makes it easy to spot the punch and strike without once removing the eyes from the work.

The hammer is light — weighing only 4 ounces — but is made of a steel forging for strength and rigidity. Both flat and ball peen heads are provided which are offset for use in corners or close to obstructions. The lens is mounted in rubber for shock resistance.

No. 815

Price \$3.00

Packed 1 in a box



# STARRETT STANDARD LETTER SIZE DRILL GAGE No. 198

*Hardened and Ground*



Letter size drills can be quickly and conveniently checked with this drill gage. Twenty-six gaging holes are provided giving corresponding drill sizes from "A" through "Z" with decimal equivalents from .234 inch diameter through .413 inch diameter.

The gage is approximately 5/64 inch thick by 2-5/16 inches wide and 6 1/4 inches long. Hardened and ground. Bright finish. Thoroughly tested after hardening.

No. 198.....\$4.10

Packed 3 in a Box.

## SET OF TOOLS No. 902B

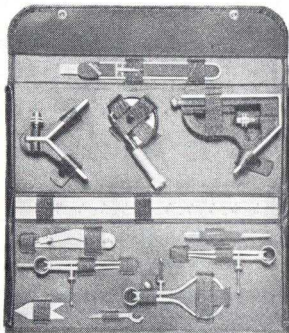
*With 12" Combination Square*

*Our Finest Set for Students, Apprentices, Home Craftsmen and Mechanics*

This superior set of tools will appeal to all students, apprentices, home craftsmen and mechanics who want nothing less than the finest in precision tools at a reasonable price.

Complete with a 12" Combination square, Micrometer and many other useful tools as listed below, the set provides all the basic tools necessary to do a good job. Every tool is the same type proven by generations of craftsmanship, and in this well balanced set provides a nucleus of fine tools which will prove indispensable through the years.

These tools are furnished in a substantial folding case made of heavy, durable artificial leather. Folding to a compact size of 12 3/4" x 5" x 1 1/4" and weighing 2 1/2 lbs., the No. 902 Set is convenient to carry, handy to use — in school, home and shop.



Contents — Complete In Case

Starrett Toolmaker Quality Throughout

- No. 436 — 1" Satin Chrome Micrometer — With Hi-Micro Finish on Anvil and Spindle, and Black Frame.
- No. 11 — 12" Combination square, Complete with Blade, Stock and Centerhead
- No. 327 — 6" Flexible Steel Rule in Case — Quick Reading
- No. 277 — 4" Toolmakers' Spring Divider
- No. 275 — 4" Toolmakers' Outside Spring Caliper
- No. 274 — 4" Toolmakers' Inside Spring Caliper
- No. 563 — 4" Firm Joint Hermaphrodite Caliper
- No. 391 — Center Gage
- No. 117D — Center Punch

No. 902B Set of Tools, Complete with Case .....Price \$33.60

Packed 1 set in a Box.

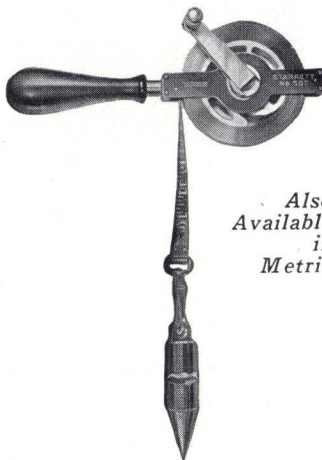
# STARRETT "OILGAGER" TAPE

*Tape line 1/2" wide. With plumb bob.  
Graduated Feet, Inches and Eighths  
Heavy Hardened Steel Frame. — Extra strong throughout.*

## No. 507

Specially designed for tank gaging. Endorsed by engineers and other members of the oil industry who are familiar with requirements and are members of the American Petroleum Institute. Equipped with swivel snap and our No. 515-C plumb bob. The lengths of snap and bob are included in the measurement. Bob readily detachable. Legibly marked with large figures and quick reading.

The frame is steel and hardened; has locking type winding handle that locks the line at any desired setting. The hard wood handle is nicely shaped to fit the hand and is removable. The solid round brass plumb bob, No. 515 C, is 1" in diameter and 6 3/4" long. It weighs 20 1/4 ounces and is tapered to penetrate heavy oils.



*Also  
Available  
in  
Metric*

### PRICES

	33 feet	50 feet	66 feet	75 feet	100 feet
No. 507 with plumb bob.....	\$19.00	\$21.80	\$24.60	\$28.50	\$35.90
Packed 1 in a box.					

## No. 508

This oil gaging tape is the same as No. 507 except that the tape line is 3/8" wide and is supplied with No. 515-B plumb bob; weight of brass bob 5 1/2 ounces.

### PRICES

	25 feet	33 feet	50 feet
No. 508 .....	\$11.30	\$12.70	\$15.40
Packed 1 in a box.			

### REFILLS FOR ABOVE TAPES

Tape lines only, with snap but without bob or frame

No. L507	No. L508
33 ft. — Each \$ 8.70	25 ft. — Each \$5.90
50 ft. — Each 10.10	33 ft. — Each 6.30
66 ft. — Each 13.30	50 ft. — Each 7.30
75 ft. — Each 15.40	
100 ft. — Each 18.90	

*NOTE: See next page for additional styles of bobs.*

# STARRETT PLUMB BOBS

*For Oil Gaging and other Steel Tapes*



No. 515-A    No. 515-B    No. 515-C    No. 515-NS    No. 515-D    No. 515-E    No. 515-F

## Innage Plumb Bobs — For Measuring Tank Contents

- No. 515-A. Made of brass with three protruding lugs. Diameter  $2\frac{3}{8}$ ". Weight 17 ounces. Because of similar length can be substituted for No. 515-B.
- No. 515 B. Solid cone style brass bob. Weight  $5\frac{1}{2}$  ounces. Suitable for light oils, gasoline, etc.
- No. 515-C. Solid round style brass bob, serrated on side, with tapered point. Suitable for heavy oils. Weight  $20\frac{1}{4}$  ounces.
- No. 515-NS Similar to No. 515-C but with replaceable eye and tip made of non-sparking beryllium copper.
- No. 515-D. Solid round style bob serrated and graduated in 8ths of an inch. Reads from point up, with zero reading at point. Weight 22 ounces.

## Outage Plumb Bobs — For Measuring Tank Outage

- No. 515-E Solid brass, square style.  $\frac{3}{4}$  inch square, with inserted dark strip which augments the oil line showing oil depth, and is more readily discernible. Graduated in 16ths of an inch and with inch markings from top to bottom. The zero point comes at the inside of top of hole. Tapes used with this bob have 0 reading point at the inside of snap. Add oil line measurement on bob to tape line. Weight  $14\frac{3}{4}$  ounces.
- No. 515-F Solid brass, cup type. Weight 20 ounces. For outage gaging of ship tanks.

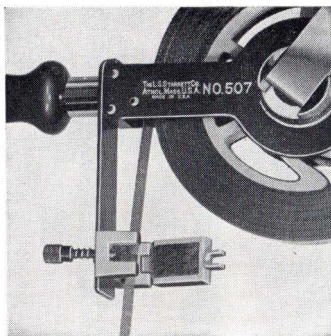
## PRICES

		Weight	Length	Diameter	Each
No. 515-A	Plumb Bob	17 ounces	$23\frac{3}{8}$ "	$2\frac{3}{8}$ "	\$2.90
No. 515-B	Plumb Bob	$5\frac{1}{2}$ ounces	$23\frac{3}{8}$ "	$1\frac{1}{4}$ "	3.60
No. 515-C	Plumb Bob	$20\frac{1}{4}$ ounces	$6\frac{3}{4}$ "	1"	4.30
No. 515-NS	Plumb Bob	$20\frac{1}{4}$ ounces	$6\frac{3}{4}$ "	1"	5.20
No. 515-D	Plumb Bob	22 ounces	$6\frac{3}{4}$ "	1"	5.70
No. 515-E	Plumb Bob	$14\frac{3}{4}$ ounces	$6\text{-}3/16$ "	$\frac{3}{4}$ " sq.	6.90
No. 515-F	Plumb Bob	20 ounces	$6\frac{3}{4}$ "	1"	4.30



## STARRETT TAPE WIPER NO. 705

This sturdy, compact Tape Wiper attachment fits all Starrett frame tapes and is designed to wipe off oil, dirt, etc. from the tape line as it is reeled in. The tape wiper has one piece construction with no loose parts to be lost, and can be quickly attached to the tape frame between the frame and handle. The upper pad plate maintains uniform spring pressure against the tape line and by releasing a bayonet lock can be swung aside for replacing pads or removing the wiper. Six extra pads supplied with each tape wiper.

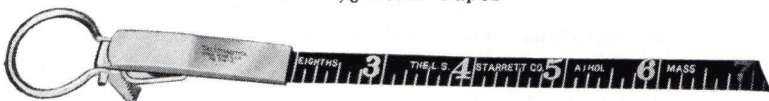


No. 705 Tape Wiper, with 6 extra pads each .....\$1.80  
 Pads only for No. 705 Wiper, per doz. .... 0.60

Packed 1 in a Box

## STARRETT TAPE HOOK NO. 514-C

*Detachable Type — With Handy Ring for Finger Hold  
 For  $\frac{3}{8}$  Steel Tapes*



This handy hook can be easily attached to Starrett  $\frac{3}{8}$ " steel tapes with rings and takes measurements from the inside of the hook. The No. 514-C has the added feature of a handy ring on the hook which permits a convenient finger-hold at the end of the tape — an especially desirable feature for measuring lengths of pipes, steel sheets, etc. Very sturdy construction, and made from brass castings with nickel plated finish.

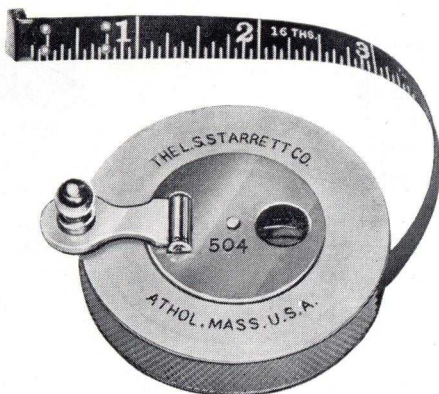
No. 514-C with ring, for  $\frac{3}{8}$ " tapes .....\$2.50

Packed 1 in a Box

# STARRETT MILLMEN'S STEEL TAPE

## NO. 504

*With Hook*



This convenient "one man" Starrett Tape has a hook riveted to the end of the tape line which enables workmen in steel mills, warehouses, etc., to readily measure metal sheets without assistance. Graduations start from the inner side of the hook and are marked with consecutive inches in 16th divisions from 1 to 144 or 1 to 240 depending on the tape length.

The tape line is made of highest quality tape steel with bright steel graduations accurately etched on one side on a No-Glare black background.

Case is rugged — made of steel to withstand hard usage — and has heavily nickel plated satin finish. As an added feature, deep knurling around the complete diameter provides a "Sure Grip" holding surface which facilitates throwing the line and hook and prevents the tape slipping in the hand when used under oily conditions. Diameter of the 144" tape is about  $2\frac{3}{8}$  inches; diameter of 240" tape,  $2\frac{5}{8}$  inches. Winding handle is flush, folding type easily released by a push button.

No. 504 with Hook — Graduated in Consecutive Inches and Sixteenths.

Length, inches

144 (12 ft.)

240 (20 ft.)

Price, each

\$4.80

\$5.90

Above Tapes Packed 1 in a Box.

# NEW CASES FOR STARRETT TOOLS

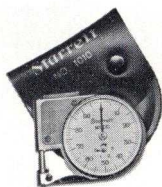
*Handsome, Protective — Prolong Their Life*



**No. 830**

## **HOLE GAGES**

Set of Five (5)—  
Range .125 to .500 inches  
In Red Plastic Case  
Price, complete.....\$15.50



**No. 1010**

## **DIAL INDICATOR POCKET GAGE**

Range 0 to  $\frac{3}{8}$  inches by  
Thousandths  
In Red Plastic Case  
Price, complete.....\$18.00



**No. 453E**

## **DIE MAKERS' SQUARE**

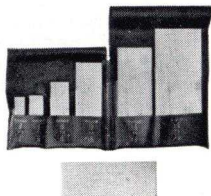
With Standard, Bevel, Narrow  
Graduated and Offset Blades  
In Red Plastic Case  
Price, complete .....\$10.70



**No. 162**

## **PIN VISES**

Set of Four (4)—  
Capacity 0 to .187 inches  
In Red Plastic Case  
Price, complete.....\$ 4.20



**No. 154L**

## **ADJUSTABLE PARALLELS**

Set of Six (6)  
In Red Plastic Case  
Price, complete.....\$15.60



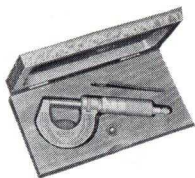
**No. 384 — SET NO. 2**

## **PARALLELS**

Set of Four (4) Pairs  
In Finished Wood Case  
Price, complete.....\$39.00

# **HANDSOME • SUBSTANTIAL • PROTECTIVE**

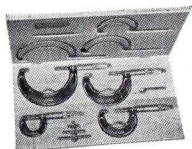
**Prolong the Life of Your Starrett Tools**



**No. 231**

## **SATIN CHROME MICROMETER**

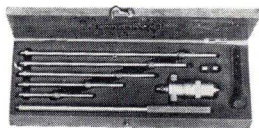
Range 0 to 1"—Tapered Frame—  
With Ratchet Stop and Lock Nut  
In Sycamore Wood Case  
Price, complete.....\$19.10



**No. 436**

## **MICROMETER SET**

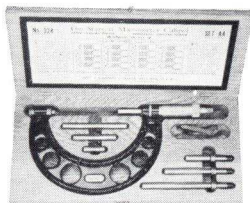
Set of Four (4)—  
Range 0 to 4 inches  
With Ratchet Stop, Lock Nut  
and Standards  
In Finished Wood Case  
Price, complete.....\$63.50



**No. 124A**

## **INSIDE MICROMETER**

Satin Chrome Finish  
Range 2 to 8 inches—  
With 6 Solid Rods  
In Finished Wood Case  
Price, complete.....\$15.50

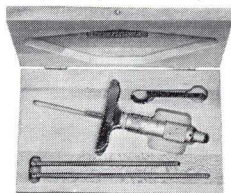


**No. 224AA**

## **MICROMETER —**

### **WITH INTERCHANGEABLE ANVILS**

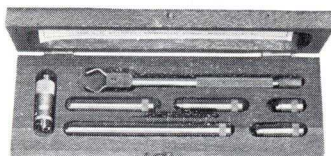
Range 0 to 4"—With Ratchet  
Stop, Lock Nut, Standards  
and Interchangeable Anvils  
In Finished Wood Case  
Price, complete.....\$33.25



**No. 440**

## **MICROMETER DEPTH GAGE**

Satin Chrome Finish  
Range 0 to 3 inches—2½" Base—  
With 3 Rods, Lock Nut and  
Ratchet Stop In Finished  
Wood Case  
Price, complete.....\$17.00



**No. 823A**

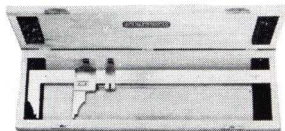
## **INSIDE MICROMETER**

Satin Chrome Finish  
Range 1½ to 8 inches—  
With 5 Tubular Rods and Handle  
In Finished Wood Case  
Price, complete.....\$19.50



# NEW CASES FOR STARRETT TOOLS

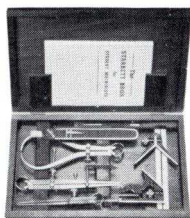
## In Plastic, Wood and Leather



**No. 122**  
**VERNIER CALIPER**  
Range 12 inches—  
Reading in thousandths  
In Finished Wood Case  
Price, complete.....\$48.75



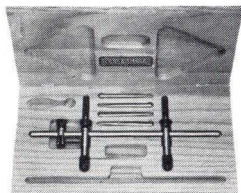
**No. 99F**  
**TRANSIT**  
With Telescope, Long Legs, and  
Ground Level Vial  
In Finished Wood Case  
Price, complete.....\$63.00



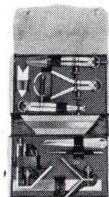
**No. 901**  
**SET OF TOOLS**  
In Finished Wood Case  
Price, complete.....\$18.50



**No. 599**  
**PLANER AND SHAPER GAGE**  
Range  $\frac{1}{4}$  to 9 inches—  
With Extension  
In Finished Wood Case  
Price, complete.....\$16.65



**No. 251A**  
**STEEL BEAM TRAMMEL**  
Range 18" Diameter Circles—  
With  $10\frac{1}{2}$  inch Beam  
In Finished Wood Case  
Price, complete.....\$12.25



**No. 900**  
**SET OF TOOLS**  
In Artificial Leather Case  
Price, complete.....\$17.00

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# Starrett

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*Standard of Precision*

MECHANICS' HAND MEASURING TOOLS AND PRECISION INSTRUMENTS • DIAL INDICATORS  
STEEL TAPES • HACKSAWS, BAND SAWS, BAND KNIVES • PRECISION GROUND FLAT STOCK



The long established Starrett policy of distribution through industrial distributors makes Starrett Mechanic's Hand Measuring Tools and Precision Instruments, Dial Indicators, Steel Tapes, Precision Ground Flat Stock, Hacksaws, Band Saws and Band Knives available through a convenient and reliable source of supply in your immediate vicinity.

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